

# TENNESSEE.

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## GENERAL STATISTICS.

**General character of the state.**—Tennessee was admitted to the Union as a state in 1796. With a gross area of 42,022 square miles, of which 41,687 represent land surface, it ranks thirty-fourth in size among the states. The inhabitants of the state in 1900 numbered 2,020,616, and in 1910, 2,184,789, and its estimated population in 1914 was 2,254,754. In total population Tennessee ranked seventeenth among the states in 1910; and in density of population it ranked thirteenth, with 52.4 inhabitants per square mile, as compared with 48.5 in 1900.

The urban population of the state in 1910—that is, the population residing in cities and towns of 2,500 inhabitants or more—was 441,045, or 20.2 per cent of the total, as against 16.2 per cent in 1900. There were in the state in 1914 six cities, each having an estimated population of more than 10,000, namely, Chattanooga, Jackson, Johnson City, Knoxville, Memphis, and Nashville. The aggregate population of these cities formed 16.9 per cent of the estimated population of Tennessee in that year, while they reported 50 per cent of the total value of the state's manufactured products.

The steam-railway mileage in 1914, as reported by the Interstate Commerce Commission, was 4,106 and the electric-railway mileage in 1912 (the latest year for which figures are available) was 350.

The transportation facilities of the state are good, as the Mississippi, Tennessee, and Cumberland Rivers

afford advantages for communication by water, while the trunk lines of a number of large railway systems, several of which center at Memphis, cross the state and afford direct connection with all parts of the country.

Tennessee is primarily an agricultural state, but the products of its soil give rise to a diversity of manufacturing interests. The climatic conditions as well as the soil, especially in the eastern and middle sections, are adapted to the growing of wheat and corn. The total value of farm crops grown in Tennessee in 1909 was \$120,706,211, of which \$55,302,278, or 45.8 per cent, represented cereals.

The United States Geological Survey's report for 1914 gives the total mineral production of the state for that year as valued at \$19,645,213, the principal product being bituminous coal, \$6,776,573.

**Importance and growth of manufactures.**—The manufactures of the state in 1914 were valued at \$212,071,489, and gave employment to an average of 74,373 wage earners. Tennessee's proportion of the total value of manufactured products of the United States was small—less than 1 per cent—in 1914, 1909, and 1904.

Table 1 summarizes the more important data relative to all classes of manufactures combined in the state of Tennessee for the censuses of 1914, 1909, 1904, and 1899, and gives the percentages of increase from census to census.

	MANUFACTURING INDUSTRIES.				PER CENT OF INCREASE. <sup>1</sup>		
	1914	1909	1904	1899	1909-1914	1904-1909	1899-1904
Number of establishments.....	4,775	4,609	3,175	3,116	3.6	45.2	1.9
Persons engaged.....	88,514	87,072	69,287	( <sup>2</sup> )	1.0	26.5	.....
Proprietors and firm members.....	5,142	5,415	3,805	( <sup>2</sup> )	-5.0	42.3	.....
Salaried employees.....	8,999	8,417	4,910	3,229	6.9	71.4	47.5
Wage earners (average number).....	74,373	73,840	60,572	45,963	0.7	21.9	31.8
Primary horsepower.....	286,857	242,277	175,780	130,313	18.4	37.8	34.9
Capital.....	\$211,423,167	\$167,923,784	\$102,439,481	\$68,140,657	25.9	63.9	62.2
Salaries and wages.....	44,911,678	37,437,834	27,888,057	17,775,169	20.0	34.3	56.9
Salaries.....	11,828,691	9,180,243	5,080,429	3,047,663	23.8	80.8	66.7
Wages.....	33,082,987	28,257,591	22,807,628	14,727,506	17.1	23.9	51.8
Paid for contract work.....	2,100,640	1,814,598	1,546,732	( <sup>2</sup> )	15.8	17.3	.....
Rent and taxes (including internal revenue).....	3,524,414	3,768,979	8,909,308	( <sup>2</sup> )	-6.5	.....	.....
Cost of materials.....	123,430,135	104,015,834	70,351,746	54,550,039	18.7	31.1	45.4
Value of products.....	212,071,489	180,216,548	137,060,476	92,740,120	17.7	30.6	48.7
Value added by manufacture (value of products less cost of materials).....	88,641,354	76,200,714	58,608,730	38,190,090	10.3	30.0	53.5

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where comparable figures can not be given. <sup>2</sup> Figures not available. <sup>3</sup> Exclusive of internal revenue.

There was a substantial increase in the manufactures for the five-year period 1909-1914, but the percentage of increase for no item was as great as that for the preceding five-year period 1904-1909. Although the number of establishments and average number of wage earners showed only slight gains,

3.6 per cent and seven-tenths of 1 per cent, respectively, manufactured products advanced 17.7 per cent.

Table 2 shows the relative importance of the leading industries in 1914 and gives percentages of increase for the three five-year periods from 1899 to 1914.

Table 2

INDUSTRY.	CENSUS OF 1914.						PER CENT OF INCREASE. <sup>1</sup>									
	Number of establishments.	Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.		
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904
All Industries.....	4,775	74,373	100.0	\$212,071,489	100.0	\$88,641,354	100.0	0.7	21.0	31.8	17.6	30.6	48.7	16.3	30.0	53.5
Lumber and timber products.....	1,072	18,276	24.6	31,430,208	14.8	10,053,885	18.8	-18.4	20.6	20.8	3.2	13.4	40.2	-1.0	10.1	55.2
Flour-mill and gristmill products.....	512	1,497	2.0	20,418,574	12.5	4,341,853	4.9	-5.1	-1.1	51.2	-0.1	14.7	32.3	14.7	10.0	21.2
Oil, cottonseed, and cake.....	24	1,054	1.4	11,414,243	5.4	2,212,754	2.5	30.8	15.0	-0.7	73.1	76.1	25.0	59.0	110.0	-0.0
Food preparations, not elsewhere specified.....	33	523	0.7	9,955,350	4.7	1,091,527	1.9	60.8	.....	(*)	107.5	.....	(*)	100.3	.....	(*)
Foundry and machine-shop products.....	142	4,309	5.8	9,802,222	4.6	5,107,070	5.7	6.6	22.0	-1.2	0.7	50.1	31.9	10.3	41.6	38.6
Cars and general shop construction and repairs by steam-railroad companies.....	17	7,201	9.7	9,088,400	4.6	5,102,001	5.7	23.4	16.0	60.0	43.0	16.1	87.6	39.4	28.0	80.5
Printing and publishing.....	437	2,065	3.0	8,200,081	3.9	5,872,254	6.6	-8.5	25.1	30.3	14.3	40.9	47.4	12.5	38.5	46.4
Hosiery and knit goods.....	26	5,090	7.7	7,522,840	3.5	3,123,670	3.5	82.5	72.2	254.2	111.0	119.0	312.2	110.2	119.3	351.4
Cotton goods.....	15	3,403	4.6	6,485,040	3.1	1,031,571	2.2	10.6	34.2	8.8	24.7	40.1	78.5	4.0	40.7	54.9
Patent medicines and compounds and druggists' preparations.....	82	648	0.9	4,042,445	2.3	3,118,377	3.5	49.7	-11.5	22.0	40.6	26.9	85.4	43.4	15.1	92.8
Fertilizers.....	15	706	0.9	4,372,427	2.1	1,780,688	2.0	20.3	-28.4	70.3	34.6	20.3	84.2	57.0	14.0	40.3
Bread and other bakery products.....	151	1,152	1.5	4,092,064	1.9	1,700,310	1.9	34.7	41.8	67.5	41.5	40.5	70.0	54.3	15.6	126.9
Furniture and refrigerators.....	53	2,172	2.9	3,730,558	1.8	2,012,180	2.3	-10.2	-7.3	144.4	13.0	2.1	172.6	8.1	1.7	188.0
Bags, other than paper.....	4	471	0.6	3,245,504	1.5	430,142	0.5	16.3	101.4	.....	41.7	162.1	.....	100.0	75.0	.....
Confectionery.....	35	774	1.0	2,989,507	1.5	1,130,573	1.3	-13.4	69.0	66.2	18.7	34.5	130.1	32.1	-5.4	133.8
Clothing, men's, including shirts.....	32	1,047	2.2	2,964,072	1.4	1,307,805	1.5	3.2	-18.0	24.2	-11.8	0.5	74.4	5.7	3.0	60.2
Stoves, hot-air furnaces, and ranges.....	13	1,412	1.9	2,705,350	1.3	1,800,703	2.0	30.1	32.5	.....	43.3	74.8	.....	46.7	60.9	.....
Carriages and wagons and materials.....	108	1,371	1.8	2,077,381	1.3	1,380,051	1.6	-19.6	-9.7	63.3	-11.9	-7.3	93.7	-13.8	-0.6	70.5
Iron and steel, blast furnaces.....	6	503	0.7	2,245,320	1.1	563,304	0.6	-56.0	15.8	-23.0	-51.8	35.7	-27.0	-55.7	55.3	-46.3
Slaughtering and meat packing.....	25	218	0.3	2,011,235	0.9	307,847	0.4	-22.1	374.6	-04.5	-2.2	445.0	-77.9	-17.7	338.2	-56.0
Leather goods.....	70	517	0.7	1,851,120	0.9	602,322	0.8	-14.4	-17.1	36.8	-13.5	10.7	50.3	-16.2	0.6	75.1
Ice, manufactured.....	70	927	1.2	1,702,193	0.8	1,357,205	1.5	10.0	103.0	-0.8	33.1	03.6	27.1	30.1	85.0	31.1
Brick, tile, pottery, and other clay products.....	77	1,688	2.3	1,095,431	0.8	1,175,005	1.3	5.2	4.8	5.4	3.6	16.1	49.1	-0.4	10.8	51.1
Marble and stone work.....	97	1,273	1.7	1,080,315	0.8	1,100,205	1.3	25.5	47.7	-0.6	15.3	55.2	11.7	18.7	62.8	-4.0
Coffee, roasting and grinding.....	7	02	0.1	1,048,100	0.8	448,433	0.5	.....	.....	.....	14.1	336.2	.....	50.8	11.0	.....
Gas, illuminating and heating.....	12	506	0.7	1,571,000	0.7	1,052,703	1.2	10.0	17.0	64.2	22.5	54.5	45.1	13.8	47.8	43.2
Woolen goods.....	17	1,060	1.4	1,540,591	0.7	923,277	0.7	-35.4	.....	.....	-14.2	.....	.....	-7.7	.....	.....
Dyestuffs and extracts.....	6	865	0.5	1,535,503	0.7	765,285	0.9	-8.6	20.7	.....	17.0	82.4	.....	14.0	*87.4	.....
Liquors, malt.....	4	337	0.5	1,345,380	0.6	855,667	1.0	-14.0	0.8	24.0	-34.2	11.6	55.9	-38.4	-0.3	52.8
Mineral and soda waters.....	36	276	0.4	1,263,128	0.6	462,755	0.6	2.6	04.0	.....	61.0	73.3	.....	14.9	57.7	.....
Copper, tin, and sheet-iron products.....	71	586	0.8	1,225,071	0.6	678,993	0.8	2.4	49.3	71.0	-0.2	41.1	147.4	6.8	45.0	123.6
Collins, burial cases, and undertakers' goods.....	8	411	0.6	1,145,894	0.5	608,220	0.7	-14.4	11.0	49.8	-3.0	28.8	47.7	-8.8	16.2	93.9
Agricultural implements.....	17	517	0.7	1,121,694	0.5	730,612	0.8	-10.8	5.2	64.3	11.8	30.6	60.1	23.7	29.0	74.3
Mattresses and spring beds.....	20	310	0.4	981,407	0.5	442,504	0.5	10.2	14.8	121.5	49.5	50.5	65.8	50.7	33.6	168.3
Wood, turned and carved.....	24	555	0.7	908,528	0.4	372,052	0.4	-34.3	36.7	.....	-22.4	20.3	.....	-41.0	38.7	.....
Confectionery (ice cream).....	23	146	0.2	768,973	0.4	339,109	0.4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Copperware and wooden goods, not elsewhere specified.....	22	506	0.7	687,065	0.3	104,589	0.2	-40.0	127.7	-30.2	-40.1	63.5	22.7	-02.4	134.8	-25.1
Paints.....	0	84	0.1	620,880	0.3	231,683	0.3	.....	.....	.....	56.4	-17.5	218.5	45.0	-17.6	211.3
Coke, not including gas-house coke.....	5	170	0.2	605,034	0.3	91,923	0.1	-32.0	-33.7	-21.0	3.2	-27.7	5.0	-14.8	-45.7	-17.8
Boxes and cartons, paper.....	8	281	0.4	590,076	0.3	227,393	0.3	39.1	8.0	7.5	120.5	31.6	48.5	66.9	47.8	33.3
Canning and preserving, fruits and vegetables.....	02	381	0.5	466,225	0.2	135,279	0.2	25.7	49.3	75.0	140.8	-14.9	236.1	80.0	-17.6	167.6
Vinegar and cider.....	6	28	(*)	391,954	0.2	170,842	0.2	.....	.....	.....	55.6	.....	.....	37.2	.....	.....
Lime.....	9	432	0.6	350,820	0.2	249,282	0.3	4.1	-0.2	.....	10.5	-0.9	.....	8.3	12.2	.....
All other industries.....	338	7,218	9.7	20,233,874	13.8	13,874,365	15.7	.....	.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Percentages are based on figures in Table 34; a minus sign (-) denotes decrease; percentages are omitted where base is less than 100, or where comparable figures can not be given.

<sup>2</sup> Less than one-tenth of 1 per cent.

In addition to the 43 industries, or industry groups, presented separately in the above table, there are 11 other industries, each of which reported products valued at more than \$350,000 in 1914. These are included under the head of "all other industries" because if they were shown separately, the operations of individual establishments would be disclosed. These industries are: Boots and shoes; cars, steam-railroad, not including operations of railroad companies; cement; chemicals; iron and steel, steel works and rolling mills; iron and steel, cast-iron pipe; leather, tanned, curried, and finished; roofing materials; smelting and refining, copper; sulphuric, nitric, and mixed acids; and tobacco manufactures.

The industries in this table are arranged in the order of their importance as measured by value of products, but the arrangement would vary considerably from that given if based on average number of wage earners employed or value added by manufacture. Lumber takes first rank in all three items, but the flour-mill and gristmill industry and the manufacture of cottonseed oil and cake, second and third in value of products, respectively, drop to tenth and sixteenth places in number of wage earners and to fifth and eighth places, respectively, in value added by manufacture. The last-mentioned industries require few employees because the process of grinding grain and crushing cotton seed are largely done by machinery. The pro-

portional value added to the raw materials by such processes is small in comparison with most other industries.

In rank according to value of products, there were a few changes in 1914 as compared with 1909. Of the more important industries shown in the table, lumber and timber products and flour-mill and gristmill products held the same rank at both censuses. Cottonseed oil and cake, which held sixth place in 1909, advanced to third in 1914, while foundry and machine-shop products and printing and publishing, ranking third and fourth, respectively, in 1909, dropped to fifth and seventh places, respectively, in 1914. For the other industries slight variations are noticeable from census to census.

*Lumber and timber products.*—This classification includes logging operations, sawmills, planing mills, the manufacture of wooden packing boxes, and window and door screens and weather strips. No statistics were collected for mills engaged exclusively in custom sawing for local consumption. Notwithstanding the fact that the rate of increase in the value of products for this industry was comparatively small (3.2 per cent) for the period from 1909 to 1914, it still leads all other industries in the state, having in 1914 over two-fifths of the number of establishments and reporting more than one-sixth of the value of products, and nearly one-fourth of the total number of wage earners. Separate statistics are shown in Table 35 for lumber and timber products and lumber, planing-mill products.

*Flour-mill and gristmill products.*—The manufacture of flour-mill and gristmill products is governed largely by crop conditions, and an increase or a decrease for any particular year does not signify that the industry as a whole is on the increase or decline. There was a decrease of 9.1 per cent in value of products for this industry from 1909 to 1914, but an increase of 4.2 per cent for the 10-year period from 1904 to 1914, and of 37.9 per cent for the 15-year period 1899 to 1914. The wage earners in this industry decreased 1.1 per cent from 1904 to 1909 and 5.1 per cent from 1909 to 1914. This may be due to improved methods of manufacturing and handling materials and manufactured products.

*Oil, cottonseed, and cake.*—The statistics include those for all establishments engaged primarily in extracting oil from cotton seed or refining crude cottonseed oil. The industry is entirely dependent upon the production of cotton, as it utilizes the seed which prior to 1870 were comparatively little used. The number of wage earners increased 30.8 per cent from 1909 to 1914, while the value of products increased 73.1 per cent.

*Food preparations.*—This industry includes bread-stuff preparations, principally self-rising flour, sweetening sirups, lard compounds, and other prepared food for human and animal consumption. The industry

ranks fourth in value of products, and fourteenth in value added by manufacture. It is undergoing a rapid development, shown by the increase in value of products from \$3,346,000 in 1909 to \$9,955,000 in 1914 or 197.5 per cent. There are separate classifications for several other kinds of food products, as follows: Bread and other bakery products; butter, cheese, and condensed milk; canning and preserving fish; canning and preserving fruits and vegetables; canning and preserving oysters; flour-mill and gristmill products; oleomargarine; pickles, preserves, and sauces; sausage; slaughtering and meat packing; sugar, beet; sugar, cane; sugar, refining; and vinegar and cider.

*Foundry and machine-shop products.*—Under this classification are included not only foundries and machine shops, but establishments engaged in the manufacture of engines, gas machines, hardware, cast-iron and steel pipe, steam fittings and heating apparatus, structural ironwork, and automobile repair work. Separate statistics are given in Table 35 for automobile repairing, boiler shops and foundries, and structural ironwork. The industry was really of greater importance in the state than is indicated by the statistics, as some machine shops manufactured a distinctive product and were therefore assigned to other classifications. The number of establishments engaged in the industry increased from 124 in 1909 to 142 in 1914. During this period the value of products increased 6.7 per cent and the number of wage earners 6.6 per cent.

*Cars and general shop construction and repairs by steam-railroad companies.*—This industry represents the work done in the car shops of steam-railroad companies and is practically confined to the repairs to the rolling stock and equipment of their own roads, although, to a limited extent, there may be some new construction of rolling stock. The statistics exclude minor repairs in roundhouses. Nearly 10 per cent of all the wage earners reported for the state were employed in the railroad repair shops. The number reported for 1914 was an increase of 29.4 per cent over 1909.

*Printing and publishing.*—All establishments engaged in bookbinding and blank-book making, steel engraving and plate printing, lithographing, job printing, and the printing and publishing of newspapers, periodicals, books, and music are included under this head. There was a decrease of 8.5 per cent from 1909 to 1914 in the number of wage earners employed in this industry, but the value of products increased 14.3 per cent.

*Textiles.*—The textile industries of the state, consisting of the manufacture of cotton goods, hosiery and knit goods, and woolen goods, are important branches of the state's manufacturing interests. Separate figures are given in the table for the three allied branches of this industry. Combined, they gave

employment to an average of 10,162 wage earners in 1914, and the value of their products amounted to \$15,555,077, this being an increase over 1909 of 29.5 per cent and 47.2 per cent, respectively. Hosiery and knit goods form the largest proportion of the textile manufactures and show a rate of increase in all items given in the table far in excess of that reported for cotton goods. The manufacture of woolen goods shows a marked decrease in both wage earners and value of products.

**Persons engaged in manufacturing industries.**—Table 3 shows for 1914 and 1909, the number of persons engaged in manufactures, distributed by sex, the average number of wage earners being distributed also by age. The sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the "Explanation of terms."

Of the 88,514 persons engaged in manufactures during 1914, 74,373 were wage earners, distributed between the sexes in the proportions of 85.6 per cent male and 14.4 per cent female. Proprietors and officials numbered 8,234, of whom only 1.5 per cent were females, while the 5,907 clerks were divided between males and females in the ratio of 4 to 1. Corresponding figures for individual industries will be found in Table 35. The number of persons engaged in manufactures in 1909 was 87,672, divided as follows:

Proprietors and officials, 8,303; clerks, 5,439; and wage earners, 73,840. The sex distribution of each class in 1909 shows only slight variations from the 1914 proportions.

**Table 3**

CLASS.	Census year.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.				
		Total.	Male.	Female.	Per cent of total.	
					Male.	Female.
All classes.....	1914 1909	88,514 87,672	76,573 77,277	11,941 10,395	86.5 88.1	13.5 11.9
Proprietors and officials.....	1914 1909	8,234 8,303	8,107 8,252	127 141	98.5 98.3	1.5 1.7
Proprietors and firm members..	1914 1909	5,142 5,415	5,068 5,303	74 112	98.6 97.9	1.4 2.1
Salaried officers of corporations..	1914 1909	1,305 1,210	1,270 1,203	29 13	97.8 98.9	2.2 1.1
Superintendents and managers..	1914 1909	1,787 1,762	1,763 1,746	24 16	98.7 99.1	1.3 0.9
Clerks and other subordinate salaried employees.	1914 1909	5,907 5,439	4,780 4,377	1,127 1,062	80.9 80.5	19.1 19.5
Wage earners (average number)....	1914 1909	74,373 73,840	63,686 64,648	10,687 9,192	85.6 87.6	14.4 12.4
16 years of age and over.....	1914 1909	73,018 71,396	62,928 63,016	10,090 8,379	86.2 88.3	13.8 11.7
Under 16 years of age.....	1914 1909	1,356 2,445	758 1,632	597 813	55.9 60.7	44.1 39.3

Table 4 gives, for the several classes of persons engaged in manufactures, the percentage of increase from 1909 to 1914 and the per cent distribution at the two censuses.

**Table 4**

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
	Per cent of increase, <sup>1</sup> 1909-1914.			Per cent distribution.					
	Total.	Male.	Female.	Total.		Male.		Female.	
				1914	1909	1914	1909	1914	1909
All classes.....	1.0	-0.9	14.9	100.0	100.0	100.0	100.0	100.0	100.0
Proprietors and officials.....	-1.9	-1.8	-0.0	9.3	9.6	10.6	10.7	1.1	1.4
Proprietors and firm members.....	-5.0	-4.4	-33.9	5.8	6.2	0.6	6.9	0.6	1.1
Salaried officers of corporations.....	7.3	0.1	.....	1.5	1.4	1.7	1.6	0.2	0.1
Superintendents and managers.....	1.4	1.0	.....	2.0	2.0	2.3	2.3	0.2	0.2
Clerks and other subordinate salaried employees.....	8.6	9.2	6.1	6.7	6.2	6.2	5.7	9.4	10.2
Wage earners (average number).....	0.7	-1.5	16.3	84.0	84.2	83.2	83.7	89.5	88.4
16 years of age and over.....	2.3	-0.1	20.4	82.5	81.4	82.2	81.5	84.5	80.6
Under 16 years of age.....	-44.6	-53.6	-20.6	1.5	2.8	1.0	2.1	5.0	7.8

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.

The total number of persons engaged in manufactures in 1914 shows an increase of only 1 per cent over the number reported in 1909. Each class, except proprietors and firm members and wage earners under 16 years of age, contributed to the increase. The decrease of 5 per cent in proprietors and firm members is due in part to changes in character of ownership, partnership organizations in many cases incorporating between censuses.

Wage earners under 16 years of age decreased 44.6 per cent and the proportion which this class formed of the total persons engaged in manufactures was reduced from 2.8 per cent in 1909 to 1.5 per cent in 1914.

Although there was a slight increase from 1909 to 1914 in the total for all classes engaged in manufactures, both sexes did not share in the increase. The decrease of nine-tenths of 1 per cent shown for males was more than offset by the increase of 14.9 per cent for females. Male wage earners under 16 years of age show the largest percentage of decrease (53.6) and female wage earners 16 years of age and over the largest increase (20.4).

In order to compare the distribution of persons engaged in manufactures in 1914 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census (see Explanation of



terms"). Table 5 makes this comparison according to occupational status.

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.							
	Number.			Per cent distribution.			Per cent of increase. <sup>1</sup>	
	1914	1909	1904	1914	1909	1904	1909-1914	1904-1909
Total.....	88,514	87,672	69,287	100.0	100.0	100.0	1.0	26.5
Proprietors and firm members.....	5,142	5,415	3,805	5.8	6.2	5.5	-5.0	42.3
Salaried employees.....	8,999	8,417	4,910	10.2	9.6	7.1	6.9	71.4
Wage earners (av. number)....	74,373	73,840	60,572	84.0	84.2	87.4	0.7	21.9

<sup>1</sup> A minus sign (—) denotes decrease.

Salaried employees show the greatest relative gain for each of the five-year periods. There was an increase of 42.3 per cent in proprietors and firm members from 1904 to 1909, but a decrease of 5 per cent from 1909 to 1914. Wage earners, the largest class, showed an increase of only seven-tenths of 1 per cent during the last five-year period, as compared with 21.9 per cent for the preceding five years.

The average number of wage earners employed and their per cent distribution as males 16 years of age and over, females 16 years of age and over, and children under 16 years of age, are given in Table 6 for 1914, 1909, and 1904. The table also shows for some of the important industries separately a similar distribution of wage earners for 1914 and 1909.

INDUSTRY.	Census year.	WAGE EARNERS.					INDUSTRY.	Census year.	WAGE EARNERS.				
		Average number. <sup>1</sup>	Per cent of total.			Average number. <sup>1</sup>			Per cent of total.				
			16 years of age and over.		Under 16 years of age.				16 years of age and over.		Under 16 years of age.		
			Male.	Female.					Male.	Female.			
All industries.....	1914 1909 1904	74,373 73,840 60,572	84.6 85.3 85.5	13.6 11.3 10.9	1.8 3.3 3.6	Furniture and refrigerators.....	1914 1909	2,172 2,419	97.6 91.4	1.3 2.8	1.1 5.8		
Bread and other bakery products.....	1914 1909	1,152 855	70.6 71.9	28.5 26.1	0.9 2.0	Hosiery and knit goods.....	1914 1909	5,690 3,117	33.1 25.8	58.6 57.6	8.3 16.6		
Brick, tile, pottery, and other clay products.	1914 1909	1,688 1,604	97.9 95.6	..... 0.2	2.1 4.2	Ice, manufactured.....	1914 1909	927 779	99.5 99.1	0.4 .....	0.1 0.9		
Carriages and wagons and materials.....	1914 1909	1,371 1,706	99.0 99.1	0.7 0.2	0.3 0.6	Lumber and timber products.....	1914 1909	18,276 22,389	97.9 98.0	1.4 0.6	0.7 1.4		
Cars and general shop construction and repairs by steam-railroad companies.	1914 1909	7,201 5,596	99.8 99.7	0.2 0.3	..... ( <sup>2</sup> )	Marble and stone work.....	1914 1909	1,273 1,006	100.0 99.6	..... 0.2	..... 0.2		
Clothing, men's, including shirts.....	1914 1909	1,647 1,596	13.7 10.2	83.5 79.1	2.8 1.7	Oil, cottonseed, and cake.....	1914 1909	1,054 806	99.2 99.9	0.8 0.1	..... .....		
Confectionery.....	1914 1909	774 804	57.1 51.2	42.6 47.7	0.3 1.1	Patent medicines and compounds and druggists' preparations.	1914 1909	648 433	44.4 41.3	52.5 58.2	3.1 0.6		
Cotton goods.....	1914 1909	3,403 3,078	40.8 44.5	39.8 37.9	10.4 17.6	Printing and publishing.....	1914 1909	2,665 2,914	81.8 76.9	17.5 20.2	0.7 3.0		
Fertilizers.....	1914 1909	706 559	100.0 100.0	..... .....	..... .....	Stoves, hot-air furnaces, and ranges.....	1914 1909	1,412 1,085	99.3 95.6	..... 3.6	0.7 0.8		
Flour-mill and gristmill products.....	1914 1909	1,497 1,577	99.5 99.0	0.4 0.1	0.1 0.9	Woolen goods.....	1914 1909	1,069 1,654	53.0 44.6	41.3 44.7	5.7 10.8		
Foundry and machine-shop products.....	1914 1909	4,369 4,041	99.7 98.6	0.2 0.2	0.1 1.2	All other industries.....	1914 1909	15,439 16,762	87.3 83.7	11.6 10.5	1.1 2.8		

<sup>1</sup> For method of estimating the distribution of the average number by sex and age periods for all industries combined, see "Explanation of terms."

<sup>2</sup> Less than one-tenth of 1 per cent.

In 1914, 84.6 per cent of the average number of wage earners, in all industries combined, were males 16 years of age and over, 13.6 per cent females, and 1.8 per cent children under 16 years of age. Corresponding figures for 1909 are 85.3 per cent, 11.3 per cent, and 3.3 per cent, respectively, while for 1904 they were 85.5 per cent, 10.9 per cent, and 3.6 per cent, respectively. The industries giving employment to the largest number of women and children were men's clothing and the textile industries. In the cotton-goods industry nearly two-fifths of the wage earners were females over 16 years of age, in the woolen goods industry a little more than two-fifths, in the hosiery and knit-goods industry nearly three-fifths, and in the men's clothing industry over four-fifths. Two other industries in

the above table, namely, confectionery and patent medicines and compounds and druggists' preparations, show relatively large numbers of female wage earners, but the actual number is small. The same industries which furnish employment to women to any considerable extent also show the greatest proportion of children, but among these industries a decreasing proportion of wage earners under 16 years of age is shown in all except men's clothing and patent medicines.

Table 7 shows the average number and the per cent distribution of wage earners employed in each of the six cities having more than 10,000 inhabitants, classified according to age periods, and in the case of those 16 years of age and over, according to sex, for 1914, 1909, and 1904.

**Table 7**

SEX AND AGE.	Census year.	AVERAGE NUMBER OF WAGE EARNERS IN—					
		Chattanooga.	Jackson.	Johnson City.	Knoxville.	Memphis.	Nashville.
Total.....	1914	7,182	1,599	611	2,420	8,380	8,573
	1909	6,410	1,495	.....	2,302	7,927	9,721
	1904	6,420	1,268	.....	2,999	7,374	8,032
16 years of age and over:							
Male.....	1914	6,382	1,434	581	1,800	7,628	6,818
	1909	5,807	1,280	.....	1,722	7,198	7,776
	1904	5,844	1,118	.....	2,192	6,556	6,200
Female.....	1914	743	47	14	699	740	1,659
	1909	494	112	.....	586	383	1,755
	1904	399	112	.....	732	671	1,658
Under 16 years of age.....	1914	57	28	10	21	21	96
	1909	109	13	.....	44	349	190
	1904	177	38	.....	75	147	174
Per cent of total:							
16 years of age and over—							
Male.....	1914	88.9	95.0	95.1	74.4	90.9	79.5
	1909	90.0	91.1	.....	72.9	90.8	80.0
	1904	91.0	88.2	.....	73.1	88.0	77.2
Female.....	1914	10.3	3.1	2.3	24.8	8.8	19.4
	1909	7.7	8.0	.....	25.2	4.8	18.1
	1904	6.2	8.8	.....	24.4	0.1	20.6
Under 16 years of age.....	1914	0.8	1.0	2.6	0.9	0.3	1.1
	1909	1.7	0.9	.....	1.9	4.4	2.0
	1904	2.8	3.0	.....	2.5	2.0	2.2

<sup>1</sup> Figures do not agree with those published because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

Table 8 gives percentages of increase from census to census, based on the figures in Table 7, for cities where per cent of increase can be computed.

**Table 8**

CITY.	PER CENT OF INCREASE IN AVERAGE NUMBER OF WAGE EARNERS. <sup>1</sup>				
	Period.	Total.	16 years of age and over.		Under 16 years of age.
			Male.	Female.	
Chattanooga.....	1904-1914	11.9	0.2	80.2	-67.8
	1909-1914	12.0	9.9	50.4	-47.7
	1904-1909	-0.2	-0.6	23.8	-38.4
Jackson.....	1904-1914	10.0	23.3	-58.0	.....
	1909-1914	7.4	12.0	-58.0	.....
	1904-1909	10.8	14.5	( <sup>2</sup> )	.....
Knoxville.....	1904-1914	-19.3	-17.9	-18.2	.....
	1909-1914	2.5	4.5	0.5	.....
	1904-1909	-21.2	-21.4	-18.6	.....
Memphis.....	1904-1914	13.8	16.4	10.3	-85.7
	1909-1914	5.8	6.0	33.2	-93.9
	1904-1909	7.5	0.8	-42.9	135.4
Nashville.....	1904-1914	6.7	10.0	0.1	-44.8
	1909-1914	-11.8	-12.3	-5.5	-49.5
	1904-1909	21.0	25.4	5.9	9.2

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.

<sup>2</sup> Same number reported for both years.

With the exception of Chattanooga and Nashville all cities in Table 7 show increases in the proportion of male wage earners over 16 years of age, while only Chattanooga, Memphis, and Nashville show increases in the proportion of females of the same age.

Jackson was the only city which did not show a decrease from 1909 to 1914 in the proportion of children employed.

For the ten-year period 1904 to 1914 the total average number of wage earners in Chattanooga increased 11.9 per cent; in Jackson, 19 per cent; in Memphis, 13.8 per cent; and in Nashville, 6.7 per cent; while

Knoxville showed a decrease of 19.3 per cent. The number of wage earners under 16 years of age decreased for the same period in each city shown in the table.

**Wage earners employed, by months.**—The following table gives, for all industries combined, the total number of wage earners employed on the 15th of each month, or the nearest representative day, for 1914 and 1909, and the average number employed during each month in 1904, together with the percentage which the number reported for each month forms of the greatest number reported for any month of the same year:

**Table 9**

MONTH.	WAGE EARNERS IN MANUFACTURING INDUSTRIES.					
	Number. <sup>1</sup>			Per cent of maximum.		
	1914	1909	1904	1914	1909	1904
January.....	73,538	69,305	58,520	95.1	85.9	93.5
February.....	74,236	69,974	58,660	96.0	86.7	93.7
March.....	76,116	71,073	60,412	98.5	88.1	96.5
April.....	77,312	70,000	60,559	100.0	87.6	96.8
May.....	76,040	69,713	60,398	98.4	86.4	96.5
June.....	76,450	70,123	60,037	98.0	86.9	95.9
July.....	76,034	71,155	59,657	98.3	88.2	95.3
August.....	76,047	74,356	61,000	98.4	92.9	97.5
September.....	75,650	78,850	62,470	97.7	97.7	99.8
October.....	72,672	80,011	62,574	94.0	99.2	100.0
November.....	70,209	80,075	61,747	90.9	100.0	98.7
December.....	68,203	70,587	60,824	88.2	98.7	97.2

<sup>1</sup> The figures for 1914 and 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during the month.

For 1914 the greatest industrial activity was during the spring months, the maximum number for the year, 77,312, being reported for April. For 1909 and 1904 the period of greatest activity was during the fall months, the maximum appearing for November in 1909 and for October in 1904. The greatest actual difference between the maximum and minimum months in any one of the three census years was 11,371 in 1909, or 14.1 per cent of the maximum.

Table 10 gives the total average number of wage earners employed during 1914, together with the total number employed on the 15th of each month, or the nearest representative day, for the combined industries of the state, for a number of selected industries, and for the total industries of each of the six cities having more than 10,000 inhabitants.

The figures in Table 10 reflect a fair degree of stability of employment in 1914 for all industries, except those which are seasonal in character. The manufacture of cottonseed oil and cake gave employment to 1,957 wage earners in November but to only 20.3 per cent of that number in August. Marked fluctuations between the months of greatest and least activity are also shown for the manufacture of ice and fertilizer, in which industries the minimum represented 33.3 per cent and 34.5 per cent, respectively, of the maximum. Printing and publishing and the manufacture of cotton goods furnish the most steady employment, the proportion of the maximum formed by the minimum being 97.6 per cent and 96 per cent, respectively.

Table 10

WAGE EARNERS, 1914.  
[Month of maximum employment for each industry is indicated by boldface figures and that of minimum by *italic* figures.]

INDUSTRY AND CITY.	Average number employed during year.	Number employed on 15th day of the month or nearest representative day.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
All industries.....	74,373	73,538	74,236	76,116	<b>77,312</b>	76,040	76,450	76,034	76,047	75,559	72,672	70,269	<i>68,203</i>	88.2
Bread and other bakery products.....	1,152	<i>967</i>	1,112	1,137	1,146	1,162	1,199	1,192	1,204	1,173	1,200	1,175	1,157	80.3
Brick, tile, pottery, and other clay products.....	1,688	1,234	1,266	1,431	1,931	2,074	2,073	<b>2,090</b>	2,021	1,990	1,588	1,333	<i>1,225</i>	58.6
Carriages and wagons and materials.....	1,371	1,423	1,470	1,501	1,493	1,473	1,424	1,434	1,469	1,390	1,194	1,130	<i>1,051</i>	70.0
Cars and general shop construction and repairs by steam-railroad companies.....	7,201	7,368	7,231	<b>7,329</b>	7,291	7,241	7,305	7,342	7,420	7,282	7,102	<i>6,734</i>	6,767	90.8
Clothing, men's, including shirts.....	1,647	1,760	<b>1,779</b>	1,696	1,771	1,752	1,768	1,495	1,686	1,572	1,579	<i>1,413</i>	1,493	79.4
Confectionery.....	774	776	741	784	788	774	738	732	774	800	787	771	823	88.0
Cotton goods.....	3,403	3,413	3,408	<b>3,354</b>	3,409	3,435	3,415	3,337	3,344	3,352	3,473	3,456	3,460	96.0
Fertilizers.....	766	592	816	1,110	1,291	731	<i>446</i>	466	550	860	588	511	511	34.5
Flour-mill and gristmill products.....	1,497	1,478	1,450	1,437	1,419	<i>1,367</i>	1,406	1,602	1,626	1,537	1,512	1,549	1,491	84.1
Foundry and machine-shop products.....	4,309	4,314	4,425	<b>4,593</b>	4,566	4,402	4,393	4,571	4,543	4,566	4,091	3,679	<i>3,625</i>	78.9
Furniture and refrigerators.....	2,172	2,125	2,314	2,447	2,430	2,508	2,428	2,188	2,215	2,095	1,890	1,776	<i>1,648</i>	65.7
Hosiery and knit goods.....	5,690	5,801	5,869	<b>6,052</b>	6,091	5,964	5,964	5,674	5,588	5,439	5,334	5,243	<i>5,201</i>	85.4
Ice, manufactured.....	927	<i>478</i>	523	592	914	1,116	1,403	1,437	1,417	1,259	820	610	555	33.3
Lumber and timber products.....	18,276	18,143	18,461	<b>19,262</b>	19,228	18,917	18,703	18,614	18,565	18,262	17,358	17,644	<i>16,095</i>	83.5
Marble and stone work.....	1,273	1,300	1,246	1,272	1,298	1,307	1,353	1,297	1,250	1,265	1,241	1,251	<i>1,199</i>	88.4
Oil, cottonseed, and cake.....	1,054	1,059	1,210	1,102	804	463	414	424	393	614	1,720	1,957	1,883	20.3
Patent medicines and compounds and druggists' preparations.....	648	627	649	665	690	703	679	698	674	650	598	578	<i>565</i>	80.4
Printing and publishing.....	2,665	2,673	2,674	2,686	2,688	2,691	2,666	2,655	<i>2,620</i>	2,651	2,652	2,646	2,672	97.6
Stoves, hot-air furnaces, and ranges.....	1,412	1,314	1,371	1,520	1,532	1,531	1,502	1,404	1,485	1,360	1,363	1,291	<i>1,262</i>	82.4
Woolen goods.....	1,069	1,190	1,180	1,172	1,118	1,121	1,139	1,019	1,016	<i>946</i>	953	953	958	70.5
All other industries.....	15,439	14,843	15,041	14,994	15,474	15,308	15,882	16,363	16,176	16,417	15,636	14,560	<i>14,565</i>	88.7
Total for cities.....	28,684	28,990	29,251	29,750	29,836	29,208	30,024	29,258	28,811	28,715	27,955	26,434	<i>25,886</i>	86.2
CHATTANOOGA.....	7,182	6,979	7,370	7,529	7,540	7,562	<b>7,560</b>	7,417	7,438	7,338	6,878	6,386	<i>6,097</i>	70.7
JACKSON.....	1,509	<b>1,495</b>	1,628	1,566	1,613	1,514	1,556	1,582	1,553	1,502	1,474	1,158	<i>1,147</i>	67.7
JOHNSON CITY.....	611	638	590	629	613	628	644	676	654	620	599	578	554	78.1
KNOXVILLE.....	2,420	2,367	2,356	2,420	2,531	2,500	2,620	2,638	2,467	2,368	2,371	2,245	<i>2,160</i>	81.6
MEMPHIS.....	8,389	8,548	8,604	<b>8,776</b>	8,720	8,246	8,431	8,399	8,328	8,153	8,317	8,186	<i>7,990</i>	90.7
NASHVILLE.....	8,573	8,763	8,703	8,800	8,819	8,948	<b>9,114</b>	8,548	8,371	8,635	8,316	7,831	7,978	86.5

Of the six cities, Jackson shows the greatest and Memphis the least degree of fluctuation, the minimum for Jackson being 67.7 per cent of the maximum and that for Memphis being 90.7 per cent.

**Prevailing hours of labor.**—In Table 11 the average number of wage earners reported for 1914 and 1909, for all industries combined and for selected industries throughout the state, have been classified according to number of hours of labor per week prevailing in the establishments in which they were employed. A similar classification is given for 1914 only, for all industries combined in each city having more than 10,000 inhabitants. The number employed in each establishment is classified as a total, even though a few employees worked a greater or less number of hours.

The figures in Table 11 emphasize the tendency toward a shortening of the working day of wage earners. In 1909, 50,848, or 68.9 per cent of the total average number of wage earners for all industries combined, were employed in establishments where the prevailing hours of labor were 60 or more per week, while for 1914 only 34,508, or 46.4 per cent of the total, were so employed. On the other hand, the number of wage

earners whose working hours were less than 60 per week increased from 22,992 in 1909 to 39,865 in 1914, forming 31.1 per cent and 53.6 per cent, respectively, of the total number in the state. The most pronounced increase in the shorter-hour groups was in that between 54 and 60 hours per week where the number of wage earners increased from 7,416 in 1909 to 18,796 in 1914, or 153.5 per cent.

Among the separate industries the most marked decrease in hours of labor is shown for lumber and timber products. Notwithstanding the fact that the total average number of wage earners in this industry decreased from 22,389 in 1909 to 18,276 in 1914, the number working in establishments where the prevailing hours per week were less than 60, increased from 3,192 in 1909 to 4,903 in 1914. The three textile industries—cotton goods, hosiery and knit goods, and woolen goods—in 1909 employed 973 wage earners working less than 60 hours per week and 9,083, in 1914.

Of the 28,684 wage earners in the six cities in 1914, 25,386, or 88.5 per cent, were in establishments where the prevailing hours were 60 or fewer per week, while only 3,298 were in establishments in which the hours were more than 60 per week.

Table 11

Table 11		Census year.	AVERAGE NUMBER OF WAGE EARNERS.								
			Total.	In establishments where the prevailing hours of labor per week were—							
				48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All Industries.....		1914 1909	74,373 73,840	4,550 3,579	3,423 2,010	13,393 9,957	18,706 7,416	26,725 30,806	3,522 6,126	2,745 2,419	1,219 2,407
Bread and other bakery products.....		1914 1909	1,152 855	82 34	17 15	477 161	90 57	303 412	83 113	31 38	9 25
Brick, tile, pottery, and other clay products.....		1914 1909	1,088 1,004	110 07	14 27	40 43	414 51	970 1,053	112 274	8 78	2 11
Carriages and wagons and materials.....		1914 1909	1,371 1,706	85 102	30 89	248 100	387 201	616 1,211	1 1	4 2	.....
Cars and general shop construction and repairs by steam-railroad companies.....		1914 1909	7,201 5,506	..... 218	10 .....	6,210 4,305	..... 887	300 14	672 142	.....	.....
Clothing, men's, including shirts.....		1914 1909	1,047 1,500	372 103	02 205	09 423	787 551	357 314	.....	.....	.....
Confectionery.....		1914 1909	774 804	112 4	12 8	175 18	241 373	191 428	43 55	..... 8	.....
Cotton goods.....		1914 1909	3,403 3,078	.....	130 .....	115 65	2,995 .....	163 1,333	..... 1,643	..... 37	.....
Fertilizers.....		1914 1909	700 550	.....	.....	100 .....	..... 46	383 512	160 .....	.....	3
Flour-mill and gristmill products.....		1914 1909	1,497 1,577	47 167	4 5	24 3	102 .....	484 410	230 78	606 913	..... 1
Foundry and machine-shop products.....		1914 1909	4,300 4,041	180 10	117 13	1,310 1,005	875 441	1,803 2,551	5 19	..... 2	.....
Furniture and refrigerators.....		1914 1909	2,172 2,419	6 .....	223 81	401 256	620 580	800 1,321	14 207	..... 24	.....
Hosiery and knit goods.....		1914 1909	5,090 3,117	.....	.....	.....	4,004 840	600 1,323	..... 954	.....	.....
Ice, manufactured.....		1914 1909	927 779	3 2	.....	5 .....	4 .....	50 23	84 50	210 87	571 611
Lumber and timber products.....		1914 1909	18,270 22,389	921 729	529 704	1,405 826	1,958 933	11,740 17,073	1,170 1,177	438 46	7 1
Marble and stone work.....		1914 1909	1,273 1,006	61 80	28 6	156 188	307 23	720 434	1 246	.....	..... 29
Oil, cottonseed, and cake.....		1914 1909	1,054 806	.....	83 .....	.....	54 .....	.....	39 .....	878 806	.....
Patent medicines and compounds and druggists' preparations.....		1914 1909	648 433	65 46	227 70	171 90	71 175	106 50	3 2	5 .....	.....
Printing and publishing.....		1914 1909	2,605 2,014	1,621 1,149	469 386	354 782	74 202	142 335	5 .....	.....	.....
Stoves, hot-air furnaces, and ranges.....		1914 1909	1,412 1,085	22 5	..... 98	508 239	702 7	..... 736	.....	.....	.....
Woolen goods.....		1914 1909	1,060 1,654	.....	.....	146 .....	703 67	180 1,029	..... 557	40 .....	.....
All other industries.....		1914 1909	15,439 15,762	874 861	1,468 383	1,191 1,453	3,310 1,922	6,544 8,344	801 602	525 378	627 1,819
Total for cities.....		1914	28,684	3,080	1,899	6,097	5,052	8,358	2,026	676	596
CHATTANOOGA.....		1914	7,182	471	365	1,248	1,584	3,113	320	2	69
JACKSON.....		1914	1,509	40	.....	723	74	330	233	74	35
JOHNSON CITY.....		1914	611	14	6	50	11	417	3	35	75
KNOXVILLE.....		1914	2,420	121	326	288	1,051	350	98	130	56
MEMPHIS.....		1914	8,389	1,028	464	2,538	951	1,743	1,146	195	324
NASHVILLE.....		1914	8,573	1,406	737	2,150	1,381	2,405	217	240	37

Location of establishments.—Table 12 shows, for 1914, 1909, and 1899, the extent to which the manufactures of Tennessee were centralized in the cities having more than 10,000 inhabitants.

In accepting the statistics in this table it must be remembered that Johnson City, which had a population of 10,000 and over at the census of 1914 was included in the district outside of the cities at prior censuses. The table shows, however, that in 1914

the manufactures of the state were evenly divided between urban and rural communities. The six cities which contained 16.9 per cent of the estimated population of the state reported 50 per cent of the total value of products and 50.6 per cent of the total value added by manufacture. Only 25.2 per cent of the total number of establishments were located in the cities, and only 38.6 per cent of the wage earners found employment in urban districts.

Table 12	Census year.	Aggregate.	CITIES HAVING A POPULATION OF 10,000 OR OVER.								DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 OR OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.			
			Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.
Number of places.....	1914		6		2		2		2			
	1910		5		1		2		2			
	1900		5		1		3		1			
Population <sup>1</sup> .....	1914	2,254,754	380,805	16.9	27,674	1.2	95,001	4.2	258,130	11.4	1,873,941	83.1
	1910	2,184,789	338,198	15.5	15,779	0.7	80,950	3.7	241,469	11.1	1,846,591	84.5
	1900	2,020,616	280,814	12.9	14,511	0.7	143,656	7.1	102,647	5.1	1,759,802	87.1
Number of establishments.....	1914	4,775	1,202	25.2	76	1.6	418	8.8	708	14.8	3,573	74.8
	1909	4,609	1,006	23.8	42	0.9	341	7.4	713	15.5	3,513	76.2
	1899	3,116	744	23.9	33	1.1	488	15.7	223	7.2	2,372	76.1
Average number of wage earners.....	1914	74,373	28,684	38.6	2,120	2.9	9,602	12.9	16,962	22.8	45,689	61.4
	1909	73,840	27,825	37.7	1,405	1.9	8,772	11.9	17,048	23.9	46,015	62.3
	1899	45,963	23,302	50.7	1,018	2.2	15,658	34.1	6,626	14.4	22,661	49.3
Value of products.....	1914	\$212,071,489	\$106,141,727	50.0	\$6,017,329	2.8	\$27,714,062	13.1	\$72,409,736	34.1	\$105,929,762	50.0
	1909	180,210,548	86,406,462	47.9	2,709,773	1.5	23,805,473	13.2	59,801,216	33.2	93,810,086	52.1
	1899	92,749,120	47,831,174	51.6	1,576,869	1.7	32,020,822	34.5	14,233,438	15.3	44,917,955	48.4
Value added by manufacture.....	1914	88,641,354	44,875,005	50.6	2,225,824	2.5	12,605,837	14.2	30,043,944	33.9	43,786,349	49.4
	1909	76,200,714	36,451,786	47.8	1,495,202	2.0	10,372,966	13.6	24,583,618	32.2	39,748,628	52.2
	1899	38,190,090	20,259,432	53.0	884,181	2.3	13,021,019	34.1	6,354,232	16.6	17,930,058	47.0

<sup>1</sup> Census estimate of population for 1914.

The relative importance in manufactures of each of the six cities having more than 10,000 inhabitants, as measured by average number of wage earners and by value of products in 1914, 1909, and 1904, is shown in Table 13. The cities are listed in the order of their importance as shown by value of products. Comparable figures for Johnson City are not available, as that city had less than 10,000 inhabitants prior to 1914.

Table 13 CITY.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1914	1909	1904	1914	1909	1904
Memphis.....	8,389	7,927	7,374	\$39,133,497	\$30,241,519	\$20,043,192
Nashville.....	8,673	9,721	8,032	33,276,239	29,649,697	21,507,013
Chattanooga.....	7,182	6,410	6,420	29,368,555	16,036,455	14,261,390
Knoxville.....	2,420	2,362	2,999	7,346,107	7,789,018	6,698,850
Jackson.....	1,509	1,405	1,268	3,417,168	2,709,773	2,317,715
Johnson City.....	611	.....	.....	2,000,161	.....	.....

<sup>1</sup> Figures do not agree with those published because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

All of the cities in the foregoing table except Knoxville, show an increase from 1909 to 1914 in value of products, and all except Nashville report a greater number of wage earners in the later year.

Memphis, the leading city in industrial importance as well as in population, had its period of greatest growth in manufactures between 1904 and 1909. During the last five years, however, the city showed an advance of \$3,891,978, or 29.4 per cent, in value of products and an increase of 462, or 5.8 per cent, in average number of wage earners. The industries contributing most to the increase were cottonseed oil and cake, tobacco, and food preparations.

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Nashville and Chattanooga, the next largest cities, showed an increase of 12.2 per cent and 27 per cent, respectively, in value of products, from 1909 to 1914, as compared with 37.5 per cent and 12.4 per cent, respectively, during the preceding five-year period. The leading industries in Nashville are the manufacture of flour-mill and gristmill products and of food preparations and printing and publishing. In Chattanooga, foundry and machine-shop products, flour-mill and gristmill products, and lumber and timber products lead all others.

Knoxville's output of manufactures decreased slightly during the five years 1909 to 1914 but increased somewhat during the preceding five years, while Jackson gained gradually from census to census. Flour mills and gristmills, the manufacture of men's clothing, and confectionery and ice cream are the leading industries in Knoxville. In Jackson the railroad repair shops, the lumber industry, and the manufacture of cottonseed oil and cake lead all others.

The statistics for that part of Bristol which lies in Tennessee are included with those for the outside districts in Table 12. Table 14 presents the totals for the entire city and for the parts situated in Tennessee and Virginia, respectively.

The leading industries of Bristol, Tenn., are the manufacture of flour-mill and gristmill products, the patent medicines and men's clothing, and those for Bristol, Va., are the manufacture of paper and wood pulp, men's clothing, and flour-mill and gristmill products.

Table 14

	TOTAL.			BRISTOL, TENN.			BRISTOL, VA.		
	1914	1909	Per cent of increase, <sup>1</sup> 1909-1914.	1914	1909	Per cent of increase, <sup>1</sup> 1909-1914.	1914	1909	Per cent of increase, <sup>1</sup> 1909-1914.
Population <sup>2</sup> .....	14,000	13,395	11.3	7,048	7,148	11.2	6,958	6,247	11.4
Number of establishments.....	67	61	9.3	20	23	-15.0	31	28	10.7
Persons engaged in manufactures.....	1,385	1,310	5.0	390	377	3.4	995	942	5.6
Proprietors and firm members.....	31	42	-26.0	12	22	-45.5	19	20	-5.0
Salaried employees.....	225	148	52.0	90	68	23.5	135	80	68.8
Wage earners (average number).....	1,129	1,120	0.8	288	287	0.3	841	842	-0.1
Primary horsepower.....	3,651	3,914	-6.7	966	1,289	-25.3	2,985	2,625	13.7
Capital.....	\$2,040,791	\$3,062,400	-34.0	\$907,921	\$1,345,671	-32.5	\$2,033,170	\$1,716,738	18.4
Salaries and wages.....	689,533	631,813	9.1	195,236	100,327	21.8	404,297	471,486	4.8
Salaries.....	239,802	142,741	68.0	83,125	53,015	53.0	141,737	80,126	59.0
Wages.....	449,731	489,072	-8.1	112,111	106,712	5.0	352,560	382,360	-7.8
Cost of materials.....	2,087,420	1,828,290	14.2	441,332	503,974	-12.7	1,045,788	1,234,322	-15.3
Value of products.....	3,307,426	2,848,777	16.1	854,575	878,100	-2.7	2,542,851	1,970,668	29.0
Value added by manufacture.....	1,310,309	1,020,481	28.4	413,243	281,135	45.4	897,003	736,346	21.8

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.<sup>2</sup> Census estimates of population for 1914.

**Character of ownership.**—Table 15 presents statistics concerning character of ownership, or legal organization, of manufacturing enterprises. For all industries combined, comparative figures are given for 1914, 1909, and 1904; for selected industries, statistics

for 1914 and 1909 are shown; and for individual cities the figures are for all industries combined and relate only to 1914. In order to avoid disclosing the operations of individual establishments, it is necessary to omit several important industries from this table.

Table 15

INDUSTRY AND CITY.		Cen- sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
						In establishments owned by—			Per cent of total.			Of establishments owned by—			Per cent of total.								
			Indi- vidu- als.	Cor- pora- tions.	All oth- ers.	Total.	Indi- vidu- als.	Cor- pora- tions.	All oth- ers.	Indi- vidu- als.	Cor- pora- tions.	All oth- ers.	Total.	Indi- vidu- als.	Corpora- tions.	All others.	Indi- vidu- als.	Corpora- tions.	All oth- ers.				
All Industries.....	1914	2,418	1,150	1,207	74,873	6,719	55,808	8,846	13.1	75.0	11.9	\$212,071,489	\$19,752,526	\$167,891,000	\$24,427,064	9.3	79.2	11.5					
	1909	2,182	1,068	1,359	73,840	11,349	51,710	10,775	15.4	70.0	14.6	180,216,548	22,206,362	133,750,538	24,250,648	12.3	74.2	13.5					
	1904	1,345	785	1,045	60,572	8,717	42,049	0,806	14.4	69.4	16.2	137,960,479	17,339,985	97,285,799	23,334,692	12.6	70.5	18.0					
Bread and other bakery products.	1914	113	21	17	1,162	201	707	154	25.2	61.4	13.4	4,092,664	986,573	2,570,561	535,530	24.1	62.8	13.1					
	1909	98	10	23	855	271	465	119	31.7	64.4	13.9	2,891,821	910,769	1,527,870	453,182	31.5	52.8	15.7					
Carriages and wagons and materials.	1914	45	25	38	1,371	167	906	298	12.2	66.1	21.7	2,677,381	267,050	1,932,603	477,719	10.0	72.2	17.8					
	1909	46	39	44	1,706	284	1,125	297	10.7	65.9	17.4	3,039,613	404,778	2,129,293	505,542	13.3	70.1	16.6					
Confectionery.....	1914	11	20	4	774	48	707	19	0.2	91.3	2.5	2,989,507	100,580	2,813,854	75,064	3.4	94.1	2.5					
	1909	9	16	6	894	33	778	83	3.7	87.0	9.3	2,520,070	100,935	2,220,074	199,061	4.0	88.1	7.9					
Flour-mill and gristmill products.	1914	257	70	185	1,497	312	905	280	20.8	60.5	18.7	20,413,574	3,847,636	18,506,701	4,059,237	14.6	70.0	15.4					
	1909	203	64	187	1,577	359	857	361	22.8	54.3	22.0	20,070,019	5,493,218	17,706,797	5,879,094	18.9	60.9	20.2					
Foundry and machine-shop products.	1914	45	70	27	4,309	257	3,875	177	0.0	89.0	4.1	9,802,222	463,595	8,034,012	403,715	4.7	91.2	4.1					
	1909	35	60	20	4,041	413	3,400	150	10.2	85.9	3.9	9,189,791	808,751	7,968,271	352,769	9.5	86.7	3.8					
Furniture and refrigerators.	1914	18	26	14	2,172	367	1,702	103	13.9	78.4	4.7	3,739,558	448,110	3,144,838	146,610	12.0	84.1	3.9					
	1909	7	31	4	2,419	222	2,104	93	9.2	87.0	3.8	3,309,385	194,084	3,045,614	99,687	5.9	92.0	2.1					
Lumber and timber products.	1914	1,197	199	570	18,276	5,118	9,057	4,101	28.0	49.0	22.4	31,430,208	6,155,520	10,218,129	6,056,550	19.6	61.1	19.3					
	1909	1,101	211	605	22,389	6,076	9,807	5,008	20.8	48.8	20.4	30,456,807	6,690,074	17,199,340	6,567,393	22.0	56.5	21.5					
Patent medicines and compounds and druggist's preparations.	1914	21	51	10	648	35	408	205	5.4	63.0	31.6	4,942,445	116,561	3,185,600	1,640,275	2.4	64.4	33.2					
	1909	15	46	15	433	12	227	194	2.8	52.4	44.8	3,514,076	53,072	1,683,423	1,778,181	1.5	47.9	50.6					
Printing and publishing..	1914	244	104	89	2,665	502	1,859	304	18.8	69.8	11.4	8,200,681	1,078,817	6,192,200	929,574	13.2	75.5	11.3					
	1909	208	84	121	2,914	426	1,663	825	14.6	57.1	28.3	7,173,230	793,011	4,488,645	1,891,574	11.0	62.6	26.4					
Total for cities.....	1914	430	549	214	28,684	2,210	24,042	2,432	7.7	83.8	8.5	106,141,727	6,007,427	91,136,179	8,998,121	5.7	85.9	8.5					
CHATTANOOGA.....	1914	102	132	42	7,182	513	6,401	268	7.2	89.1	3.7	20,208,555	1,431,987	18,302,499	634,069	7.0	89.9	3.1					
JACKSON.....	1914	16	23	7	1,509	60	1,355	94	4.0	89.8	6.2	3,417,168	180,361	2,951,305	305,502	4.7	86.4	8.9					
JOHNSON CITY.....	1914	12	16	2	611	167	544	.....	11.0	89.0	.....	2,660,161	140,937	2,450,224	.....	5.4	94.6	.....					
KNOXVILLE.....	1914	58	58	20	2,420	301	1,684	435	12.4	69.0	18.0	7,346,107	606,011	5,890,637	840,459	8.3	80.3	11.4					
MEMPHIS.....	1914	148	162	44	8,580	597	7,278	514	7.1	86.8	6.1	39,133,497	2,056,453	34,846,386	2,230,658	5.3	89.0	5.7					
NASHVILLE.....	1914	103	158	93	8,573	672	6,780	1,121	7.8	79.4	13.1	33,276,230	1,611,678	26,677,128	4,987,433	4.8	80.2	15.0					

<sup>1</sup> Includes the group "all others."

This table shows an increase during the decade in number of establishments throughout the state under individual and corporate forms of ownership. The greatest proportion of the establishments—more than one-half the total in 1914—is shown for those under individual ownership; but in value of products and average number of wage earners, those owned by cor-

porations greatly predominate. Although only 24.1 per cent of the total number of establishments were under corporate ownership, this class reported 79.2 per cent of the total value of products and 75 per cent of the total average number of wage earners. In 1909 and 1904 the corresponding proportions were only slightly less. For both 1914 and 1909 the largest pro-



of the total number of establishments for all the cities taken as a group is under corporate ownership.

**Size of establishments.**—The tendency for manufacturing to become concentrated in large establishments is indicated by the statistics given in Table 16.

VALUE OF PRODUCT.

Table 16 VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904
All classes.....	4,775	4,609	3,175	74,373	73,840	60,572	\$212,071,489	\$180,216,548	\$137,960,476	\$88,641,354	\$76,200,714	\$58,608,730
Less than \$5,000.....	2,208	2,082	1,015	4,825	5,541	1,784	5,140,687	4,040,418	2,607,791	3,124,602	3,058,539	1,766,725
\$5,000 to \$20,000.....	1,311	1,352	1,084	6,626	8,675	6,260	12,936,810	13,380,348	11,301,086	6,843,063	7,335,137	6,129,232
\$20,000 to \$100,000.....	735	789	766	13,821	15,370	16,318	32,359,591	34,700,071	33,535,276	14,824,135	15,749,778	15,427,691
\$100,000 to \$1,000,000.....	401	360	299	38,355	37,822	30,419	111,005,000	96,928,066	71,720,092	45,759,004	40,751,742	29,694,696
\$1,000,000 and over.....	30	17	11	10,746	6,423	5,791	50,568,795	30,507,045	18,796,201	18,090,490	9,305,518	5,590,386
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	48.1	45.2	32.0	6.5	7.5	2.9	2.4	2.6	1.9	3.5	4.0	3.0
\$5,000 to \$20,000.....	27.5	29.3	34.1	8.9	11.7	10.3	6.1	7.4	8.2	7.7	9.6	10.5
\$20,000 to \$100,000.....	15.4	17.1	24.1	18.6	20.8	26.9	15.3	19.2	21.3	16.7	20.7	26.3
\$100,000 to \$1,000,000.....	8.4	8.0	9.4	51.6	51.2	50.2	52.4	53.8	52.0	51.6	53.5	50.7
\$1,000,000 and over.....	0.6	0.4	0.3	14.4	8.7	9.6	23.8	17.0	13.6	20.4	12.2	9.5

lishments, the percentages being, 76.2, 70.8 and 65.6 for 1914, 1909, and 1904, respectively. On the other hand, the smaller establishments—those reporting products valued at less than \$100,000—showed a decreasing proportion for this item, from census to census, namely, 23.8 per cent in 1914, 29.2 per cent in 1909, and 34.4 per cent in 1904.

Table 17 gives, for 1914 and 1909, for nine of the more important industries, a classification of establishments, wage earners, value of products, and value added by manufacture, similar to that presented in Table 16 for all industries combined.

INDUSTRY AND VALUE OF PRODUCT.

Table 17	NUMBER OF ESTABLISHMENTS.				AVERAGE NUMBER OF WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
INDUSTRY AND VALUE OF PRODUCT.	1914	1909	Per cent distribution.		1914	1909	Per cent distribution.		1914	1909	Per cent distribution.		1914	1909	Per cent distribution.	
			1914	1909			1914	1909			1914	1909			1914	1909
BREAD AND OTHER BAKERY PRODUCTS.....	151	131	100.0	100.0	1,152	855	100.0	100.0	\$4,002,604	\$2,891,821	100.0	100.0	\$1,700,319	\$1,102,219	100.0	100.0
Less than \$5,000.....	53	47	35.1	35.9	68	58	5.9	6.8	154,137	130,354	3.8	4.7	77,404	54,744	4.6	5.0
\$5,000 to \$20,000.....	97	64	44.4	48.9	169	197	14.7	23.0	693,720	628,319	14.5	21.7	279,126	270,593	16.1	25.1
\$20,000 to \$100,000.....	21	13	13.9	9.9	185	135	16.0	15.8	675,010	538,402	16.5	18.6	294,571	228,846	17.3	20.8
\$100,000 to \$1,000,000.....	10	7	6.6	5.3	730	405	63.4	54.4	2,068,897	1,588,746	65.2	54.9	1,055,158	542,093	62.1	49.2
CARRIAGES AND WAGONS AND MATERIALS.....	108	129	100.0	100.0	1,371	1,706	100.0	100.0	2,677,380	3,039,613	100.0	100.0	1,380,051	1,000,187	100.0	100.0
Less than \$5,000.....	44	47	40.7	36.4	98	150	7.1	8.8	123,826	135,408	4.6	4.5	80,130	88,742	5.8	5.5
\$5,000 to \$20,000.....	34	45	31.5	34.9	214	298	15.6	17.5	330,908	432,681	12.7	14.2	190,847	263,791	13.8	16.5
\$20,000 to \$100,000.....	23	30	21.3	23.3	550	753	40.1	44.1	967,559	1,200,524	36.1	42.5	521,066	665,244	38.0	41.0
\$100,000 to \$1,000,000.....	7	7	6.5	6.4	509	505	37.1	29.6	1,240,096	1,181,000	46.5	38.9	585,008	582,410	42.4	36.4
CONFECTIONERY.....	35	31	100.0	100.0	774	894	100.0	100.0	2,989,507	2,520,070	100.0	100.0	1,130,573	862,881	100.0	100.0
Less than \$5,000.....	4	4	11.4	12.9	7	5	0.9	0.6	13,089	7,050	0.4	0.3	8,492	4,037	0.7	0.5
\$5,000 to \$20,000.....	11	7	31.4	22.6	73	39	9.4	4.4	132,083	87,095	4.4	3.5	68,900	36,737	6.1	4.2
\$20,000 to \$100,000.....	12	11	34.3	35.5	129	131	16.7	14.7	449,718	431,728	15.0	17.1	204,091	174,348	17.9	20.2
\$100,000 to \$1,000,000.....	8	9	22.9	29.0	565	719	73.0	80.4	2,394,617	1,993,597	80.1	70.1	858,000	648,122	75.3	75.1
FLOUR-MILL AND GRISTMILL PRODUCTS.....	512	454	100.0	100.0	1,497	1,577	100.0	100.0	20,413,574	20,070,010	100.0	100.0	4,341,853	3,784,153	100.0	100.0
Less than \$5,000.....	131	89	26.2	15.2	51	49	3.4	3.1	377,588	190,545	1.1	0.7	82,154	38,529	1.9	1.0
\$5,000 to \$20,000.....	202	190	39.4	41.8	212	217	14.2	13.8	2,330,851	2,131,505	8.8	7.3	503,491	414,268	11.6	10.9
\$20,000 to \$100,000.....	142	160	27.7	35.2	409	453	27.3	28.7	5,681,092	6,842,747	21.5	23.5	1,067,330	1,144,602	24.6	30.2
\$100,000 to \$1,000,000.....	29	29	5.7	6.4	387	382	25.8	21.2	8,230,556	6,902,173	31.2	23.7	1,310,108	801,445	30.2	21.2
\$1,000,000 and over.....	5	6	1.0	1.3	438	476	29.3	30.2	9,793,487	13,002,959	37.1	44.7	1,378,770	1,385,309	31.7	36.0

## MANUFACTURES—TENNESSEE.

INDUSTRY AND VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.				AVERAGE NUMBER OF WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
			Per cent distribution.				Per cent distribution.				Per cent distribution.				Per cent distribution.	
	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909
FOUNDRY AND MACHINE-SHOP PRODUCTS.....	142	124	100.0	100.0	4,309	4,041	100.0	100.0	\$9,802,222	\$9,189,791	100.0	100.0	\$5,107,070	\$4,629,591	100.0	100.0
Less than \$5,000.....	31	20	21.8	23.4	44	52	1.0	1.3	82,421	72,293	0.8	0.8	57,312	46,655	1.1	1.0
\$5,000 to \$20,000.....	51	34	35.9	27.4	297	209	6.9	5.2	559,692	345,085	5.7	3.8	370,040	197,507	7.4	4.3
\$20,000 to \$100,000.....	37	42	26.1	33.9	1,017	1,138	23.0	28.2	1,803,909	1,964,688	18.4	21.4	979,090	1,108,527	19.2	23.9
\$100,000 to \$1,000,000.....	23	10	16.2	15.3	2,951	2,642	68.5	65.4	7,359,197	6,800,845	75.1	74.1	3,691,619	3,276,812	72.3	70.8
FURNITURE AND REFRIGERATORS.....	58	42	100.0	100.0	2,172	2,419	100.0	100.0	3,739,558	3,300,385	100.0	100.0	2,012,180	1,801,512	100.0	100.0
Less than \$5,000.....	15	3	25.0	7.1	20	7	1.3	0.3	31,770	6,672	0.8	0.2	20,115	5,250	1.0	0.3
\$5,000 to \$20,000.....	17	12	29.3	28.6	158	90	7.3	4.1	170,151	120,911	4.6	3.7	109,146	70,918	5.4	3.8
\$20,000 to \$100,000.....	12	13	20.7	31.0	302	635	13.9	26.2	656,470	687,780	17.6	20.8	209,126	347,016	14.0	18.6
\$100,000 to \$1,000,000.....	14	14	24.1	33.3	1,983	1,678	77.5	69.4	2,881,101	2,494,022	77.0	75.4	1,583,793	1,438,208	78.7	77.3
LUMBER AND TIMBER PRODUCTS.....	1,972	1,977	100.0	100.0	18,270	22,389	100.0	100.0	31,430,208	30,456,807	100.0	100.0	16,653,885	16,815,306	100.0	100.0
Less than \$5,000.....	1,304	1,198	66.1	60.6	3,537	4,085	19.4	18.2	2,415,462	2,572,282	9.0	8.4	1,758,585	1,771,000	10.6	10.5
\$5,000 to \$20,000.....	424	536	21.5	27.1	3,090	4,061	16.9	22.2	3,785,089	4,950,787	12.0	16.3	2,300,170	3,177,175	13.8	18.9
\$20,000 to \$100,000.....	105	174	5.4	8.8	3,882	4,505	21.2	20.1	6,713,155	7,310,344	21.4	24.0	3,485,729	3,976,519	20.9	23.6
\$100,000 and over.....	170	69	4.0	3.5	7,767	8,778	42.5	39.2	18,116,032	15,611,394	57.6	51.3	9,108,401	7,801,682	54.7	46.9
PATENT MEDICINES AND COMPOUNDS AND DRUGGISTS' PREPARATIONS.....	82	76	100.0	100.0	648	433	100.0	100.0	4,042,445	3,614,676	100.0	100.0	3,118,377	2,173,870	100.0	100.0
Less than \$5,000.....	29	30	35.4	39.6	21	12	3.2	2.8	61,019	52,462	1.2	1.5	44,064	36,915	1.4	1.7
\$5,000 to \$20,000.....	25	23	30.6	30.3	65	60	10.0	13.6	263,596	230,750	6.3	6.8	155,639	161,394	5.0	7.4
\$20,000 to \$100,000.....	16	18	19.6	23.7	130	117	20.0	27.0	607,215	982,421	13.5	28.0	408,944	531,720	13.1	24.5
\$100,000 and over.....	12	5	14.6	6.0	426	245	65.8	50.6	3,050,615	2,210,043	79.9	63.7	2,509,730	1,443,841	80.5	66.4
PRINTING AND PUBLISHING.....	437	413	100.0	100.0	2,665	2,614	100.0	100.0	8,200,681	7,173,230	100.0	100.0	5,872,254	5,219,645	100.0	100.0
Less than \$5,000.....	200	208	60.9	64.0	311	375	11.7	12.0	640,323	587,600	6.7	8.2	424,299	462,082	7.2	8.9
\$5,000 to \$20,000.....	115	91	26.3	22.0	401	382	15.0	13.1	1,051,870	831,443	12.8	11.6	615,754	515,915	13.9	12.4
\$20,000 to \$100,000.....	40	35	9.2	8.5	672	607	25.2	22.9	1,945,612	1,377,535	23.7	19.2	1,394,917	955,725	23.2	18.3
\$100,000 to \$1,000,000.....	10	19	3.7	4.0	1,281	1,490	48.1	51.1	4,653,876	4,376,643	56.7	61.0	3,200,326	3,150,684	55.7	60.5

<sup>1</sup> Includes the group "\$1,000,000 and over."

The industries selected for presentation in the above table reflect the same general trend as that shown for all industries combined, namely, a tendency toward concentration into large establishments. In the manufacture of confectionery and of patent medicines and compounds, 80.1 per cent and 79.9 per cent, respectively, of the value of products, in 1914 was reported by establishments whose products were valued at \$100,000 or more. The remainder of the industries shown in the table, with the exception of manufacture of carriages and wagons and materials, each reported more than 50 per cent of the total value of products as being the output of such establishments in 1914. The largest proportion of manufactures produced by the small establishments was reported for the lumber industry, 9 per cent of the value of products being contributed by establishments valuing their products at less than \$5,000.

Table 18 presents, for 1914, for all industries combined in each of the six cities having more than 10,000 inhabitants, statistics similar to those given in Table 16 for the state as a whole.

In the cities, as throughout the state, a preponderance as to number of wage earners, value of products, and value added by manufacture was reported by establishments whose products exceeded \$100,000 in value. The highest percentages of total value of products reported by establishments in this class, 88.1 and 85.2, appear for Johnson City and Memphis, respectively, and the lowest, 68.2, is shown for Knoxville.

CITY AND VALUE OF PRODUCT.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
		Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.
CHATTANOOGA.....	276	7,182	100.0	\$20,368,555	100.0	\$9,615,360	100.0
Less than \$5,000.....	76	91	1.3	186,489	0.9	112,653	1.2
\$5,000 to \$20,000.....	90	443	6.2	972,611	4.8	677,379	6.0
\$20,000 to \$100,000.....	58	1,043	14.5	2,830,396	14.2	1,422,304	14.8
\$100,000 and over.....	52	5,605	78.0	16,519,059	80.1	7,502,604	78.0
JACKSON.....	40	1,509	100.0	3,417,168	100.0	1,577,263	100.0
Less than \$5,000.....	8	9	0.6	17,304	0.5	9,363	0.6
\$5,000 to \$20,000.....	15	75	5.0	137,783	4.0	78,016	4.9
\$20,000 to \$100,000.....	13	205	13.6	620,491	18.2	311,673	19.8
\$100,000 to \$1,000,000.....	10	1,220	80.8	2,641,590	77.3	1,178,211	74.7
JOHNSON CITY.....	30	611	100.0	2,000,161	100.0	648,561	100.0
Less than \$5,000.....	9	20	3.3	32,077	1.2	22,706	3.5
\$5,000 to \$20,000.....	15	144	23.6	277,033	10.7	130,159	20.1
\$100,000 and over.....	6	447	73.2	2,290,901	88.1	495,696	76.4
KNOXVILLE.....	142	2,420	100.0	7,346,107	100.0	2,990,477	100.0
Less than \$5,000.....	46	63	2.6	120,227	1.6	76,927	2.6
\$5,000 to \$20,000.....	38	201	8.3	418,307	5.7	225,130	7.5
\$20,000 to \$100,000.....	40	820	34.3	1,799,376	24.5	935,502	31.3
\$100,000 and over.....	18	1,327	54.8	5,011,198	68.2	1,752,900	58.6
MEMPHIS.....	354	8,389	100.0	39,133,497	100.0	16,128,500	100.0
Less than \$5,000.....	84	97	1.2	240,510	0.6	176,174	1.1
\$5,000 to \$20,000.....	101	438	5.2	1,126,067	2.9	693,761	4.3
\$20,000 to \$100,000.....	98	1,084	20.1	4,448,055	11.4	2,349,835	14.6
\$100,000 to \$1,000,000.....	66	4,486	53.5	21,706,389	55.5	8,477,242	52.6
\$1,000,000 and over.....	5	1,684	20.1	11,005,873	29.7	4,431,488	27.5
NASHVILLE.....	354	8,573	100.0	33,276,239	100.0	13,914,844	100.0
Less than \$5,000.....	90	90	1.1	203,777	0.6	139,930	1.0
\$5,000 to \$20,000.....	100	447	5.2	1,128,205	3.4	693,947	5.0
\$20,000 to \$100,000.....	93	1,467	17.1	4,434,034	13.3	2,200,409	15.8
\$100,000 to \$1,000,000.....	67	5,821	67.9	19,138,633	57.5	8,074,495	58.0
\$1,000,000 and over.....	4	742	8.7	8,370,640	25.2	2,800,063	20.2

<sup>1</sup> Includes the group, "\$1,000,000" and over.

<sup>2</sup> Includes the group, "\$20,000 to \$100,000."

Table 19 shows the size of establishments in 1914 as measured by the number of wage earners employed, for all industries combined, for 20 of the more impor-

tant industries, and for each of the six cities having more than 10,000 inhabitants.

Table 19

INDUSTRY AND CITY.	TOTAL.		ESTABLISHMENTS EMPLOYING—																	
			No wage earners.		1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.		51 to 100 wage earners.		101 to 250 wage earners.		251 to 500 wage earners.		501 to 1,000 wage earners.		Over 1,000 wage earners.	
	Estab-lish-ments.	Wage earners (average number).	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.		
All Industries.....	4,775	74,373	424	2,819	6,534	919	9,663	297	9,899	158	11,344	117	17,688	31	10,270	6	3,697	4	5,278	
Bread and other bakery products.....	151	1,152	12	110	242	17	135	7	213	2	131	3	431							
Brick, tile, pottery, and other clay products.....	77	1,088		30	74	32	359	6	187	3	198	6	870							
Carriages and wagons and materials.....	108	1,371	3	56	143	31	341	11	351	7	536									
Cars and general shop construction and repairs by steam-railroad companies.....	17	7,201				3	26	2	59			2	480	6	1,975	1	583	3	4,078	
Clothing, men's, including shirts.....	32	1,647	2	2	5	9	131	8	283	8	548	2	380	1	300					
Confectionery.....	35	774		12	30	14	155	5	167	2	156	2	266							
Cotton goods.....	15	3,493								6	445	5	701	3	1,057			1	1,200	
Fertilizers.....	15	706		4	13	3	31	2	80	4	319	2	263							
Flour-mill and gristmill products.....	512	1,497	130	343	621	30	315	4	105	4	283	1	173							
Foundry and machine-shop products.....	142	4,309	8	56	152	37	303	20	714	7	540	11	1,582	3	928					
Furniture and refrigerators.....	58	2,172	3	18	42	15	179	7	205	5	380	10	1,366							
Hosiery and knit goods.....	26	5,690		1	4			1	47	7	524	10	1,815	4	1,262	3	2,638			
Ice, manufactured.....	70	927		41	115	17	209	11	367			1	236							
Lumber and timber products.....	1,972	18,276	44	1,333	3,229	436	4,306	91	2,931	42	2,982	22	3,230	4	1,589					
Marble and stone work.....	97	1,273	18	54	112	13	154	5	176	3	190	4	641							
Oil, cottonseed, and cake.....	24	1,054		1	2	6	96	10	416	6	407	1	133							
Patent medicines and compounds and druggists' preparations.....	82	648	12	47	97	15	156	7	211			1	184							
Printing and publishing.....	437	2,065	122	232	544	46	493	17	604	5	348	5	676							
Stoves, hot-air furnaces, and ranges.....	13	1,412		2	4			4	136	3	213	2	255	1	301	1	503			
Woolen goods.....	17	1,069		5	5	3	37	3	111	2	162	3	479	1	275					
All other industries.....	875	15,439	70	462	1,100	192	2,147	76	2,536	42	2,982	24	3,518	8	2,583	1	573			
Total for cities.....	1,202	28,681	128	493	1,248	302	3,515	139	4,783	66	4,848	58	8,492	14	4,172	1	503	1	1,123	
CHATTANOOGA.....	276	7,182	29	120	289	58	664	28	917	17	1,221	18	2,368	6	1,723					
JACKSON.....	46	1,509	2	19	63	14	211	3	74	3	195	4	605	1	361					
JOHNSON CITY.....	30	611		16	43	6	45	4	138	3	211	1	174							
KNOXVILLE.....	142	2,420	10	68	184	34	433	17	601	10	754	3	448							
MEMPHIS.....	354	8,389	28	156	377	91	1,065	43	1,547	17	1,273	16	2,310	2	685			1	1,123	
NASHVILLE.....	354	8,573	59	114	292	99	1,097	44	1,506	16	1,194	16	2,578	5	1,403	1	503			

Table 20 presents, for 1914, percentages based on the figures in Table 19, and for 1909 similar percentages for all industries combined and for individual industries in the state as a whole.

There were 424 establishments for which no wage earners are shown. These are small establishments in which the work is done by the proprietors or firm members. In some cases they employ a few wage earners for short periods, but the number is so small and the period so short that in computing the average member, as described in the "Explanation of terms," no wage earners could be shown for the establishment. The small establishments—those employing from 1 to 20 wage earners—formed 78.3 per cent of the total for the state, but gave employment to only 21.8 per cent of the total wage earners reported. The groups of establishments having more than 100 wage earners, although representing only 3.3 per cent of the total number of establishments in the state, gave employment to 49.7 per cent of the total number of wage earners.

Table 20

INDUSTRY AND CITY.	Cen-sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.								
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000	
All industries.....	1914 1909	8.8 8.4	13.0 16.8	13.3 14.1	15.3 14.7	23.8 23.3	13.8 12.4	5.0 8.5	7.1 1.8	
Bread and other bakery products.....	1914 1909	21.0 27.1	11.7 19.3	18.5 7.5	11.4 15.8	37.4 30.3				
Brick, tile, pottery, and other clay products.....	1914 1909	4.4 9.7	21.3 18.8	11.1 20.2	11.7 12.7	51.5 32.6				
Carriages and wagons and materials.....	1914 1909	10.4 9.8	24.0 30.1	25.6 23.7	20.1 29.2		7.2			
Cars and general shop construction and repairs by steam-railroad companies.....	1914 1909		0.4 0.1	0.8 0.7		6.7 12.4	27.4 30.4	8.1 33.0	56.6 23.4	
Clothing, men's, including shirts.....	1914 1909	0.3 0.9	8.0 6.5	17.2 17.5	33.3 32.0	23.1 43.0	18.2			
Confectionery.....	1914 1909	3.9 1.5	20.0 15.3	21.6 13.2	20.2 22.4	34.4 47.7				
Cotton goods.....	1914 1909			4.7	13.1	20.6 21.1	31.1 9.7		35.3 51.3	
Fertilizers.....	1914 1909	1.8 2.0	4.4 2.3	11.3 17.2	45.2 34.3	37.3 41.2				
Flour-mill and gristmill products.....	1914 1909	41.5 43.1	21.0 16.7	7.0 15.1	18.9 13.1	11.6 12.0				

**Table 20—Continued**

INDUSTRY AND CITY.	Census year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
Foundry and machine-shop products.	1914 1909	3.5 2.6	9.1 12.0	16.0 12.4	12.5 20.7	36.7 23.9	21.5 28.5	.....	.....
Furniture and refrigerators.....	1914 1909	1.9 1.5	8.2 2.7	9.4 14.6	17.5 24.1	62.9 46.8	10.4 .....	.....	.....
Hosiery and knit goods.....	1914 1909	0.1 0.2	..... 1.5	0.8 2.2	9.2 8.3	31.9 44.6	22.2 22.1	35.8 21.3	.....
Ice, manufactured.....	1914 1909	12.4 13.7	22.5 17.0	30.0 35.2	..... 33.5	25.5 .....	.....	.....	.....
Lumber and timber products...	1914 1909	17.7 13.1	23.6 30.7	16.0 14.5	16.3 8.9	17.7 19.8	8.7 10.2	.....	2.8
Marble and stone work.....	1914 1909	8.8 11.8	12.1 23.0	13.8 28.7	14.9 .....	50.4 36.5	.....	.....	.....
Oil, cottonseed, and cake.....	1914 1909	0.2 0.2	0.1 2.9	39.5 42.2	38.0 37.8	12.6 10.9	.....	.....	.....
Patent medicines and compounds and druggists' preparations.	1914 1909	15.0 20.6	24.1 24.0	32.6 17.3	.....	28.4 37.2	.....	.....	.....
Printing and publishing.....	1914 1909	20.4 18.4	18.5 18.5	22.7 21.0	13.1 20.2	25.4 17.6	8.7 .....	.....	.....
Stoves, hot-air furnaces, and ranges.	1914 1909	0.3 0.6	..... 4.8	9.6 14.0	15.1 10.6	18.1 31.4	21.3 38.6	35.6 .....	.....
Woolen goods.....	1914 1909	0.5 0.2	3.6 1.5	10.4 2.2	15.2 14.8	44.8 24.7	25.7 25.9	30.7 .....	.....
All other industries.....	1914 1909	7.1 6.3	13.9 15.4	10.4 16.9	19.3 21.2	22.8 22.4	16.7 10.9	3.7 6.9	.....
Total for cities.....	1914	4.4	12.3	16.7	16.9	20.6	14.5	1.8	3.9
CHATTANOOGA.....	1914	4.0	9.2	12.8	17.0	38.0	24.0	.....	.....
JACKSON.....	1914	4.2	14.0	4.9	12.9	40.1	23.9	.....	.....
JOHNSON CITY.....	1914	7.0	7.4	22.6	34.5	28.5	.....	.....	.....
KNOXVILLE.....	1914	7.0	17.9	24.8	31.2	18.6	.....	.....	.....
MEMPHIS.....	1914	4.6	12.7	18.4	15.2	27.9	8.2	.....	13.4
NASHVILLE.....	1914	3.4	12.8	17.6	13.9	30.1	16.4	5.9	.....

The single group having the largest number of wage earners was the group comprising the establishments employing from 101 to 250 wage earners. This group

employed 17,688 wage earners, or 23.8 per cent of the total. The industries in which the comparatively large establishments are found are steam-railroad repair shops, the textile industries, and foundries and machine shops. In bakeries, flour mills and gristmills, and lumber mills, a majority of the establishments employ from 1 to 5 wage earners.

Among the cities the highest percentages of the total number of wage earners reported by establishments employing more than 100 wage earners were shown for Jackson, 64; Chattanooga, 57; and Nashville 52.4.

**Engines and power.**—Table 21 shows, for 1914, 1909, and 1904, for all industries combined, the number and total horsepower of engines and motors employed in generating power (including electric motors operated by purchased current). It also shows separately the number and horsepower of electric motors operated by current generated in the establishments reporting.

This table shows an increase in primary power amounting to 44,580 horsepower, or 18.4 per cent, from 1909 to 1914, due almost entirely to an increase in rented power. The use of rented power, almost wholly electric, has greatly increased since 1904, when it represented only 1.5 per cent of the total primary power. In 1909 this class of power had increased to 6.3 per cent of the total and in 1914 to 20.2 per cent. The increase in the use of electric motors run by current generated within the same establishments has not kept pace with that in rented power. The power of motors operated by current generated in the same establishments represented 66.1 per cent of the total electric power in 1904 but only 30.4 per cent in 1914.

**Table 21**

Table 21	POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
					Amount.			Per cent distribution.		
		1914	1909	1904	1914	1909	1904	1914	1909	1904
Primary power, total.....		8,821	6,058	3,205	286,857	242,277	175,780	100.0	100.0	100.0
Owned.....		4,312	4,441	3,205	228,086	226,972	173,123	79.8	93.7	98.5
Steam engines and turbines.....		3,581	3,764	2,750	210,150	215,338	161,919	75.4	88.9	92.1
Internal-combustion engines.....		346	317	128	3,435	1,853	1,084	1.2	0.8	0.6
Water wheels, turbines, and motors.....		385	360	321	9,396	9,781	10,120	3.3	4.0	5.8
Rented.....		4,509	1,617	.....	57,871	15,305	2,657	20.2	6.3	1.5
Electric.....		4,509	1,617	(*)	57,858	14,666	2,230	20.2	6.1	1.3
Other.....		.....	.....	.....	13	639	427	(*)	0.3	0.2
Electric.....		5,983	2,579	.....	83,107	29,586	3,586	100.0	100.0	100.0
Rented.....		4,509	1,617	(*)	57,858	14,666	2,230	69.6	49.6	33.9
Generated by establishments reporting.....		1,474	962	180	25,249	14,920	4,356	30.4	50.4	66.1

\* Figures for horsepower include for 1909 and 1904 the amount reported under the head of "other" owned power.

† Not reported.

‡ Less than one-tenth of 1 per cent.

The increase from 1909 to 1914 in owned power was only 2,014 horsepower, or nine-tenths of 1 per cent. Over three-fourths of this increase was in internal-combustion engines, steam engines showing a small increase in total horsepower and water wheels a decrease.

**Fuel.**—Closely related to the subject of power employed in manufactures is that of the fuel consumed

in generating this power or otherwise used in the manufacturing processes.

Table 22 shows, for 1914, the quantity of each kind of fuel used, for which data were obtained, for all industries combined and for selected industries in the state as a whole, and for all industries combined in each city.

Table 22

INDUSTRY AND CITY.	COAL.		Coke (tons, 2,000 lbs.).	Oil, in- cluding gasoline (bar- rels).	Gas (1,000 cubic feet).	INDUSTRY AND CITY.	COAL.		Coke (tons, 2,000 lbs.).	Oil, in- cluding gasoline (bar- rels).	Gas (1,000 cubic feet).
	An- thra- cite (tons, 2,240 lbs.).	Bitumi- nous (tons, 2,000 lbs.).					An- thra- cite (tons, 2,240 lbs.).	Bitumi- nous (tons, 2,000 lbs.).			
All industries.....	2,231	1,830,582	371,945	64,113	60,634	Liquors, malt.....	.....	29,372	.....	38	.....
Bread and other bakery products.....	818	4,476	3,768	15	2,949	Lumber and timber products.....	.....	43,268	282	329	677
Brick, tile, pottery, and other clay products.....	.....	128,964	1,730	156	.....	Oil, cottonseed, and cake.....	.....	78,582	.....	361	.....
Cars and general shop construction and repairs by steam-railroad companies..	18	89,386	738	5,522	.....	Printing and publishing.....	21	5,961	510	245	11,914
Coke, not including gas-house coke.....	.....	455,598	.....	9	.....	Woolen goods.....	.....	10,607	.....	26	.....
Cotton goods.....	.....	51,620	4,000	15	.....	All other industries.....	1,354	572,491	82,098	7,404	40,528
Flour-mill and gristmill products.....	.....	61,272	700	1,835	25	Total for cities.....	2,170	506,649	104,823	50,447	131,768
Foundry and machine-shop products..	20	39,964	28,914	2,029	3,649	CHATTANOOGA.....	.....	125,711	29,421	1,934	5,972
Furniture and refrigerators.....	.....	17,179	59	152	100	JACKSON.....	.....	28,766	1,021	59	3,620
Gas, illuminating and heating.....	.....	63,275	13,386	45,767	700	JOHNSON CITY.....	2	8,040	45,943	11	100
Hosiery and knit goods.....	.....	28,690	.....	139	2	KNOXVILLE.....	22	34,581	1,767	978	5,644
Ice, manufactured.....	.....	130,069	.....	71	.....	MEMPHIS.....	2,001	179,045	12,606	45,185	25,129
Iron and steel, blast furnaces.....	.....	19,808	235,760	.....	.....	NASHVILLE.....	145	130,506	14,065	2,580	91,363

## SPECIAL STATISTICS.

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantities and cost of materials, the quantity and value of products, and other information for securing which no provision is made on the general schedule. Certain data of this character for seven important industries and for power laundries in Tennessee are here presented.

**Flour-mill and gristmill products.**—Table 23 gives the quantities and values of flour-mill and gristmill products for the last three census years.

Table 23	1914	1909	1904
Total value.....	\$26,413,574	\$29,070,019	\$25,350,758
Wheat flour:			
Barrels.....	3,093,197	3,009,089	3,186,677
Value.....	\$15,620,227	\$17,267,395	\$17,024,123
Corn meal and corn flour:			
Barrels.....	1,601,617	1,981,746	2,052,765
Value.....	\$5,400,920	\$9,505,710	\$4,771,722
Bran and middlings:			
Tons.....	124,783	.....	.....
Value.....	\$2,890,257	191,993	168,784
Feed and offal:			
Tons.....	74,659	\$4,846,030	\$3,119,194
Value.....	\$2,240,085	.....	.....
All other cereal products, value.....	\$127,935	\$442,411	\$426,207
All other products, value.....	\$74,150	\$7,873	\$9,512

As shown in the table, wheat flour formed the major part of the flour-mill and gristmill products, followed by corn meal, the two together representing nearly four-fifths of the total in 1914. The equipment reported for 1914 consists of 1,961 stands of rolls, 516 runs of stone, and 197 attrition mills. There were 20 establishments that manufactured their own barrels and three which manufactured sacks.

**Oil, cottonseed, and cake.**—Although Tennessee produced only 2.7 per cent of the cotton crop of 1913 the state ranked eighth in the value of cottonseed products manufactured in 1914. Memphis is the most important cottonseed-crushing center in the world. The city has 12 mills which during the season covered by the report crushed 182,235 tons of seed. Large quantities of seed are brought to the city from

Arkansas and Mississippi and, occasionally, smaller amounts from Missouri, Louisiana, and Alabama.

Table 24 gives the quantity of cottonseed used for oil extraction and the quantities of the several crude products obtained, for the census years 1914, 1909, and 1904.

Table 24 MATERIAL AND PRODUCT.	QUANTITY.		
	1914	1909	1904
Cottonseed crushed, tons.....	267,466	179,475	143,479
Crude products manufactured:			
Oil, gallons.....	10,860,022	7,525,409	5,780,599
Meal and cake, tons (2,000 lbs.).....	117,886	76,963	58,477
Hulls, tons (2,000 lbs.).....	78,761	59,434	53,738
Linters, pounds.....	10,820,252	8,533,484	5,918,496

The statistics in this table for 1914 relate to the crushing season of 1913-14 that is, to the handling of seed from the crop of 1913. They cover the operations of all establishments which crushed cottonseed during the season, regardless of the extent to which they were engaged in other branches of industry. Furthermore, the crude products reported represent the total production derived from crushing cottonseed, whether sold as such or used as intermediate products in further processes of manufacture, such as the refining of oil and the mixing of fertilizer and feed.

The total quantity of cottonseed crushed increased from 143,479 tons in 1904 to 267,466 tons in 1914, or 86.4 per cent. Of the 23 mills reported in 1914 as crushing cottonseed, 1 crushed 1,000 but less than 2,000 tons; 1 crushed 2,000 but less than 5,000 tons; 10 crushed 5,000 but less than 10,000 tons; 9 crushed 10,000 but less than 20,000 tons; and 2 crushed 20,000 tons or over.

The quantities of the various products obtained in 1914 per ton of seed, as received at the mill, were as follows: Crude oil, 40.6 gallons; cake and meal, 882 pounds; hulls, 589 pounds; and linters, 74.1 pounds. The ratios which the several products bore to the total

weight of the seed when received at the mill were: Crude oil, 15.2 per cent; cake and meal, 44.1 per cent; hulls, 29.4 per cent; and linters, 3.7 per cent.

**Printing and publishing.**—The following table shows the number and circulation of the newspapers and periodicals published in Tennessee as reported at the censuses of 1914, 1909, and 1904:

Table 25 PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1914	1909	1904	1914	1909	1904
Total.....	344	330	334	6,960,391	5,601,641	3,167,803
Daily.....	17	16	17	301,583	246,058	183,050
Sunday.....	6	7	9	171,558	183,190	126,005
Semiweekly.....	8	10	3	11,382	10,925	8,720
Weekly.....	224	223	230	923,117	923,431	753,290
Monthly.....	50	49	33	876,683	617,943	217,143
Quarterly.....	31	19	31	4,407,800	3,049,100	1,780,021
All other classes.....	8	6	11	186,263	65,688	70,674

From 1909 to 1914 there was an increase both in the total number of publications and the aggregate circulation. The weeklies showed a very slight change; the monthlies, an increase of 358,045, or 69.2 per cent, in circulation; the quarterlies, which have by far the largest circulation of all publications, showed an increase of 12 in number and 848,700, or 23.3 per cent, in circulation. The Sunday-school quarterlies comprise a large part of this class and contribute to the gain from census to census.

All of the publications reported were printed in the English language except two weeklies, which were in German. This class shows a decrease from 1909, when there were two Spanish quarterlies also.

**Textiles.**—The growth of the textile industry, as a whole, is shown by the increase in the number of spindles, looms, and knitting machines. In Table 26 the number of each of the principal kinds of machines used at the last three censuses is given.

Table 26 MACHINE.	Cen- sus, year.	Total.	Cotton goods.	Hosiery and knit goods.	Woolen goods.
Producing spindles.....	1914 1909 1904	342,639 286,506 200,047	281,006 226,038 153,375	31,644 11,802 .....	28,999 48,976 40,672
Looms.....	1914 1909 1904	6,033 5,143 4,086	5,180 4,283 3,008	.....	873 800 1,078
Knitting machines.....	1914 1909 1904	6,749 3,929 1,787	.....	6,749 3,929 1,787	.....
Woolen cards (sets). ....	1914 1909 1904	62 82 82	.....	.....	62 82 82

The total number of producing spindles shows an increase from 1909 to 1914 of 56,133, or 19.6 per cent; looms, an increase of 890, or 17.3 per cent; and knitting machines, an increase of 2,820, or 71.8 per cent. The number of woolen cards decreased from 82 in 1909 to 62 in 1914. Of the three textile industries, cotton goods heretofore has been the most important in the

state, followed by hosiery and knit goods; but, for 1914, these two industries exchange rank, hosiery and knit goods taking first place and cotton goods second.

**Hosiery and knit goods.**—The table which follows shows, for 1914, 1909, and 1904, the quantity and cost of the principal materials and the quantity and value of the principal products of the hosiery and knit-goods industry.

Table 27	1914	1909	1904
MATERIALS.			
Total cost.....	\$4,300,170	\$2,120,225	\$969,196
Cotton yarn purchased:			
Pounds.....	10,100,327	4,746,086	4,701,653
Cost.....	\$2,544,195	\$1,203,887	\$841,092
Chemicals and dyestuffs, cost.....	\$208,071	\$121,014	\$40,915
Fuel and rent of power, cost.....	\$75,790	\$42,916	\$18,146
All other materials, cost.....	\$1,571,114	\$751,808	\$369,043
PRODUCTS.			
Total value.....	\$7,522,846	\$3,565,436	\$1,627,823
Hose:			
Dozen pairs.....	4,491,264	2,420,817	1,155,692
Value.....	\$4,307,949	\$2,075,719	\$917,233
Half hose:			
Dozen pairs.....	1,045,985	846,330	650,754
Value.....	\$1,183,127	\$770,547	\$368,702
All other products, value.....	\$2,051,770	\$719,170	\$341,798

The hosiery and knitting mills of Tennessee are engaged almost exclusively in the production of cotton hosiery. In 1914 the value of hosiery constituted 72.7 per cent of the total, a slightly lower percentage than in 1909. There was an increase of 69.5 per cent in quantity and of 92.2 per cent in value from 1909 to 1914. Three mills were engaged in the manufacture of underwear in 1914, the statistics for which are included with "all other products," to avoid the disclosure of the operations of individual establishments.

**Cotton goods.**—The quantity and cost of materials used, and the kind, quantity, and value of the products reported at the last three censuses are given below:

Table 28	1914	1909	1904
MATERIALS.			
Total cost.....	\$1,551,000	\$3,343,672	\$2,240,973
Cotton:			
Pounds.....	33,531,384	28,312,077	19,292,275
Cost.....	\$4,075,406	\$2,941,046	\$2,045,900
Starch, cost.....	\$18,210	\$8,085	\$10,554
Fuel and rent of power, cost.....	\$141,963	\$103,111	\$55,054
All other materials, cost.....	\$318,481	\$201,430	\$128,965
PRODUCTS.			
Total value.....	\$6,485,640	\$5,200,701	\$3,560,984
Brown or bleached sheetings and shirt- ings:			
Square yards.....	24,862,255	7,690,680	6,184,888
Value.....	\$918,841	\$435,958	\$341,530
Yarns, for sale:			
Pounds.....	8,601,057	7,443,170	5,062,494
Value.....	\$1,733,007	\$1,378,695	\$992,260
Cotton waste, for sale:			
Pounds.....	2,246,044	2,164,304	2,293,961
Value.....	\$68,806	\$56,954	\$84,322
All other products, value.....	\$3,714,380	\$3,329,184	\$2,142,872

In 1914, 33,531,384 pounds of cotton, all domestic, costing \$4,075,406, were consumed in this industry.



This was an increase of 5,219,307 pounds, or 18.4 per cent, in quantity and of \$1,134,360, or 38.6 per cent, in cost over the figures for 1909. The industry shows a gain of 24.7 per cent in value of products from 1909 to 1914, as against a gain of 46 per cent from 1904 to 1909.

Both the quantity and the value of the output of brown or bleached sheetings and shirtings show large increases over the figures for 1909, 223 per cent for quantity and 110.8 per cent for value. In 1909 there were 7,443,170 pounds of yarn produced for sale, and in 1914 there were 8,601,057 pounds, an increase of 1,157,887 pounds, or 15.6 per cent.

**Woolen goods.**—Measured by value of products, this industry is less important than either hosiery and knit goods or cotton goods. The larger part of the output is woolen goods for men's wear woven on cotton warp.

**Fertilizers.**—The following table gives the statistics for the fertilizers manufactured in 1914, 1909, and 1904:

Table 29	1914	1909	1904
Total value.....	\$4,372,427	\$3,240,343	\$2,700,561
Fertilizers:			
Tons.....	1,325,417	170,356	159,493
Value.....	\$4,385,817	\$3,234,114	\$2,661,012
Complete and ammoniated fertilizers—			
Tons.....	160,517	130,343	83,370
Value.....	\$2,806,126	\$2,776,372	\$1,596,764
Superphosphates and concentrated phosphates—			
Tons.....	47,327	25,322	29,416
Value.....	\$444,064	\$244,278	\$308,284
All other fertilizers—			
Tons.....	117,573	14,691	46,707
Value.....	\$1,085,027	\$213,464	\$755,964
All other products, value.....	\$36,610	\$15,220	\$39,549

<sup>1</sup> In addition, 4,040 tons, valued at \$73,105, were produced by cottonseed-oil mills and establishments engaged primarily in the manufacture of other products.

The industry shows a large growth for each census period. The increase in the quantity of fertilizers manufactured in 1914, as compared with 1909, was 146,061 tons, or over 80 per cent, and in value \$1,101,703, or 34.1 per cent, the average value per ton being somewhat less in 1914 than in either of the prior years. In addition to the product of the regular fertilizer establishments, there was produced in 1914 by cottonseed mills and establishments engaged primarily in the manufacture of commodities other than fertilizers, 4,040 tons of fertilizers, valued at \$73,105, giving a total production of 329,457 tons, valued at \$4,408,922.

**Iron and steel, blast furnaces.**—The blast-furnace industry was greatly affected by the industrial depression of 1914, and the pig-iron product of the state was not only less than that of 1913 and the years immediately preceding, but less than that reported at the census of 1889 and all censuses subsequent thereto. In 1914 the total value of products for the industry was \$2,245,329, as compared with \$4,653,125 in 1909, a decrease of 51.7 per cent, and the pig-iron product was but 158,751 tons in 1914, as compared with

333,416 tons in 1909, a decrease of 52.4 per cent. The iron is chiefly of foundry grade and, with the exception of a small amount of charcoal iron, was all made with coke fuel. According to the report of the American Iron and Steel Institute, there were 18 blast furnaces in the state at the close of the year 1914, of 781,650 tons annual capacity, this including active and idle establishments. Only 6 furnaces were in operation in 1914 and the production was only about one-fifth of the capacity of all furnaces.

**Laundries.**—Statistics for power laundries are not included in the general tables nor in the totals for manufacturing industries. Table 30, however, summarizes these statistics for Tennessee for 1914 and 1909.

Table 30	POWER LAUNDRIES.		
	Number or amount.		Per cent of increase, <sup>1</sup> 1909-1914
	1914	1909	
Number of establishments.....	67	63	.....
Persons engaged.....	2,898	2,392	21.2
Proprietors and firm members.....	62	68	.....
Salaried employees.....	266	175	40.3
Wage earners (average number).....	2,580	2,149	20.1
Primary horsepower.....	3,107	1,863	66.8
Capital.....	\$1,558,029	\$1,283,583	21.4
Salaries and wages.....	1,123,490	811,213	38.5
Salaries.....	214,819	187,680	56.0
Wages.....	908,671	623,533	34.9
Paid for contract work.....	1,519	6,612	-77.0
Rent and taxes.....	66,312	48,903	35.6
Cost of materials.....	437,720	237,691	47.0
Amount received for work done.....	2,206,797	1,643,407	39.8

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100.

In 1914 Tennessee ranked sixteenth among the states in amount received for work done and fourteenth in number of persons engaged in the industry.

Table 31 shows, for 1914 and 1909, the number of wage earners employed in the laundries on the 15th of each month, or the nearest representative day, and the percentage which this number represents of the greatest number employed in any month of the same year.

Table 31	WAGE EARNERS.			
	Number.		Per cent of maximum.	
	1914	1909	1914	1909
January.....	2,507	2,041	90.9	90.9
February.....	2,510	2,039	91.0	90.8
March.....	2,520	2,059	91.4	91.7
April.....	2,509	2,130	91.0	94.8
May.....	2,583	2,117	93.7	94.3
June.....	2,714	2,196	98.4	97.8
July.....	2,767	2,236	100.0	99.6
August.....	2,690	2,246	97.6	100.0
September.....	2,042	2,183	85.8	97.2
October.....	2,508	2,189	93.1	97.5
November.....	2,489	2,171	90.3	96.7
December.....	2,473	2,177	89.7	96.9

Table 32 gives statistics as to kinds and amounts of power used in the laundries of the state in 1914 and 1909, together with the percentages of increase for the five-year period.

## MANUFACTURES—TENNESSEE.

Table 32

KIND.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.		
			Amount.		Per cent of increase, <sup>1</sup> 1909-1914.
	1914	1909	1914	1909	
Primary power, total.....	193	101	3,107	1,863	66.8
Owned.....	90	65	2,715	1,801	50.7
Steam.....	67	61	2,083	1,797	49.3
Internal combustion.....	1	1	2	5	
Water wheels and motors.....	22		30		
Rented.....	103	30	392	61	
Electric.....	103	30	391	61	
Other.....			1		
Electric—generated in establishments reporting.....	297		870		

<sup>1</sup> Percentages are omitted, where base is less than 100.

Table 33 shows the kinds and quantities of fuel used in the laundries, as reported at the censuses of 1914 and 1909, with the percentages of increase.

KIND.	Unit.	QUANTITY.		Per cent of increase, <sup>1</sup> 1909-1914.
		1914	1909	
Anthracite coal.....	Tons (2,240 lbs.)	315		
Bituminous coal.....	Tons (2,000 lbs.)	30,431	29,395	34.1
Coke.....	Tons (2,000 lbs.)	280	313	-10.5
Oil.....	Barrels	61	91	
Gas.....	1,000 feet	16,897	9,108	85.5

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted, where base is less than 100.

## GENERAL TABLES.

Table 34 gives for 1914, 1909, and 1904 the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for selected industries in the state and in the cities having 50,000 inhabitants or more; and for the cities having more than 10,000 inhabitants, similar data for all industries combined.

Table 35 presents for 1914, in the state as a whole and in cities with 50,000 inhabitants or more, statistics in detail for each industry that can be shown without the disclosure of the operations of individual establishments, and the statistics for all industries combined for each of the cities in the state having more than 10,000 inhabitants.

TABLE 34.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904.

INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse-power.	Wages.	Cost of materials.	Value of products.	INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse-power.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.	Expressed in thousands.	Expressed in thousands.						Expressed in thousands.	Expressed in thousands.	Expressed in thousands.
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.															
All industries.....	1914	4,775	74,373	286,857	\$33,083	\$123,430	\$212,071	Dyestuffs and extracts....	1914	6	365	4,065	\$173	\$770	\$1,530
	1909	4,609	73,840	242,277	28,252	104,016	180,217		1909	6	336	4,110	156	642	1,313
	1904	3,175	60,572	175,780	22,806	79,352	137,900		1904	5	259	2,541	103	392	720
Agricultural implements..	1914	17	517	1,450	253	391	1,122	Fertilizers.....	1914	15	706	3,752	320	2,592	4,372
	1909	16	645	1,236	238	413	1,004		1909	12	559	2,152	204	2,122	3,249
	1904	12	613	602	216	314	769		1904	10	781	1,970	210	1,712	2,701
Bags, other than paper...	1914	4	471	395	156	2,806	3,246	Flour-mill and gristmill products.	1914	512	1,497	28,246	642	22,072	26,414
	1909	5	405	576	130	2,081	2,291		1909	454	1,577	27,170	559	25,286	29,070
Boxes and cartons, paper..	1914	8	281	213	92	342	569	Food preparations.....	1914	387	1,595	23,441	591	21,912	25,351
	1909	6	202	114	58	122	258		1909	33	523	4,886	242	8,264	9,955
	1904	6	187	70	46	104	196		1909	23	308	1,061	133	2,711	3,346
Bread and other bakery products.	1914	151	1,152	887	527	2,392	4,093	Foundry and machine-shop products.	1914	142	4,309	10,405	2,385	4,695	9,802
	1909	131	855	645	376	1,790	2,892		1909	124	4,041	7,488	2,006	4,500	9,190
	1904	81	603	316	237	1,021	1,974		1904	100	3,313	4,742	1,482	2,854	6,124
Brick, tile, pottery, and other clay products.	1914	77	1,688	5,195	724	520	1,695	Furniture and refrigerators.	1914	58	2,172	6,187	959	1,727	3,740
	1909	97	1,604	5,309	569	456	1,636		1909	42	2,419	3,758	897	1,448	3,309
	1904	92	1,531	3,700	506	344	1,409		1904	40	2,610	3,023	923	1,409	3,238
Canning and preserving, fruits and vegetables.	1914	62	381	738	62	361	496	Gas, illuminating and heating.	1914	12	506	655	292	518	1,571
	1909	37	303	450	39	131	200		1909	11	422	613	164	357	1,232
	1904	16	203	360	30	151	242		1904	11	358	624	127	204	890
Carriages and wagons and materials.	1914	108	1,371	4,221	674	1,297	2,677	Hosiery and knit goods...	1914	26	5,690	4,754	1,527	4,399	7,523
	1909	129	1,706	4,537	993	1,439	3,040		1909	22	3,117	2,758	724	2,120	3,565
	1904	97	1,880	4,408	759	1,068	3,278		1904	16	1,810	1,052	341	960	1,628
Cars and general shop construction and repairs by steam-railroad companies.	1914	17	7,201	6,323	4,622	4,580	9,688	Ice, manufactured.....	1914	70	927	13,056	492	405	1,762
	1909	17	5,566	5,145	3,252	3,116	6,777		1909	57	779	9,327	362	281	1,324
	1904	16	4,760	1,904	2,617	2,978	5,839		1904	37	382	6,312	191	123	694
Clothing, men's, including shirts.	1914	32	1,647	579	477	1,657	2,965	Iron and steel, blast furnaces.	1914	6	503	0,580	233	1,682	2,245
	1909	34	1,596	503	402	2,123	3,361		1909	13	1,143	18,150	519	3,381	4,053
	1904	32	1,968	650	413	1,877	3,069		1904	13	1,358	21,011	546	2,609	3,428
Coffee, roasting and grinding.	1914	7	92	331	40	1,200	1,648	Leather goods.....	1914	47	517	428	260	1,159	1,851
	1909	8	66	206	25	1,147	1,444		1909	47	604	344	243	1,313	2,139
	1904	5	46	61	18	264	331		1904	36	729	268	258	966	1,787
Coffins, burial cases, and undertakers' goods.	1914	8	411	961	227	538	1,146	Lime.....	1914	9	432	670	137	108	357
	1909	8	480	976	201	522	1,189		1909	20	415	668	139	93	323
	1904	8	430	712	185	349	923		1904	17	416	695	118	121	326
Coke, not including gas-house coke.	1914	5	170	493	74	513	605	Liquors, malt.....	1914	4	337	2,755	228	490	1,345
	1909	8	250	370	87	478	586		1909	5	392	3,005	233	653	2,044
	1904	9	377	405	129	611	810		1904	4	357	1,774	162	437	1,832
Confectionery.....	1914	35	774	1,247	300	1,850	2,990	Lumber and timber products.	1914	1,972	18,276	84,046	6,853	14,776	31,430
	1909	31	894	1,164	276	1,657	2,620		1909	1,977	22,389	83,382	6,906	13,641	30,457
	1904	25	560	313	181	901	1,873		1904	1,122	17,277	52,831	6,456	11,500	26,864
Cooperage and wooden goods, not elsewhere specified.	1914	22	506	991	123	493	688	Marble and stone work...	1914	97	1,273	4,001	632	520	1,089
	1909	19	856	2,209	253	629	1,148		1909	81	1,006	2,781	515	480	1,465
	1904	25	376	884	134	481	702		1904	32	681	1,204	331	339	944
Copper, tin, and sheet-iron products.	1914	271	586	489	327	547	1,226	Mattresses and spring beds	1914	20	316	750	149	539	981
	1909	57	572	154	261	593	1,229		1909	17	272	1,000	104	362	656
	1904	35	383	150	204	435	871		1904	12	237	217	72	216	436
Cotton goods.....	1914	15	3,403	12,311	1,046	4,554	6,486	Mineral and soda waters..	1914	86	276	477	140	770	1,263
	1909	17	3,078	11,129	857	3,344	5,201		1909	83	269	251	101	351	780
	1904	16	2,294	8,301	531	2,241	3,561		1904	36	164	83	66	178	450

<sup>1</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.

<sup>2</sup> Includes "stamped and enameled ware," not elsewhere specified, and "tinware," not elsewhere specified.

<sup>3</sup> Includes "automobile repairing," "engines, steam, gas, and water"; "gas machines and gas and water meters"; "hardware"; "hardware, saddlery"; "iron and steel, cast-iron pipe"; "steam fittings and steam and hot-water heating apparatus"; and "structural ironwork, not made in steel works or rolling mills."

<sup>4</sup> Includes "saddlery and harness" and "trunks and valises."

<sup>5</sup> Includes "boxes, wooden packing"; "lumber, planing-mill products, not including planing mills connected with sawmills"; and "window and door screens."

## MANUFACTURES—TENNESSEE.

TABLE 34.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of ma- terials.	Value of prod- ucts.	INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of ma- terials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.															
Oil, cottonseed, and cake..	1914	24	1,054	10,802	\$410	\$9,201	\$11,414	Stoves, hot-air furnaces, and ranges.	1914	13	1,412	1,638	\$807	\$986	\$2,795
	1909	20	800	7,472	290	5,201	6,593		1909	17	1,085	1,380	519	717	1,951
	1904	20	701	6,006	245	3,084	3,744		1904	10	819	830	404	340	1,116
Paints.....	1914	9	84	1,180	48	389	621	Vinegar and cider.....	1914	6	28	86	15	215	392
	1909	6	71	1,045	37	238	397		1909	6	23	2	14	123	252
	1904	4	76	205	30	288	481								
Patent medicines and compounds and drug- gists' preparations.	1914	182	648	802	240	1,824	4,942	Wood, turned and carved.	1914	24	555	1,790	237	530	909
	1909	76	433	418	148	1,341	3,515		1909	42	845	2,519	273	520	1,171
	1904	47	480	371	143	901	2,789		1904	24	618	1,857	212	464	927
Printing and publishing..	1914	437	2,065	2,802	1,871	2,328	8,201	Woolen goods.....	1914	17	1,069	2,302	289	923	1,517
	1909	413	2,014	2,005	1,701	1,951	7,173		1909	21	1,054	2,371	419	1,127	1,802
	1904	340	2,330	1,013	1,231	1,323	6,091		1904	27	1,415	2,590	327	945	1,706
Slaughtering and meat packing.	1914	425	218	1,278	100	1,613	2,011	All other industries.....	1914	361	7,304	58,050	3,591	15,852	30,063
	1909	27	280	1,242	140	1,010	2,057		1909	367	6,508	18,827	2,934	11,334	22,350
	1904	12	50	030	23	275	377		1904	338	5,518	15,252	2,008	11,023	18,530

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

MEMPHIS—All indus- tries.	1914	351	8,380	24,693	\$4,001	\$23,005	\$39,133	MEMPHIS—Continued. Leather goods.	1914	7 11	58	59	\$36	\$174	\$283
	1909	329	7,027	21,320	4,288	17,851	30,242		1909	9	64	54	39	151	262
	1904	280	7,374	.....	3,543	11,338	20,013		1904	8 5	60	.....	27	116	171
Bread and other bakery products.	1914	45	531	334	237	843	1,700	Lumber and timber products.	1914	9 17	932	4,202	537	1,577	2,901
	1909	31	421	312	202	864	1,452		1909	18	1,126	3,250	503	1,504	2,830
	1904	27	266	.....	113	440	787		1904	16	945	.....	421	1,059	1,917
Carriages and wagons and materials.	1914	10	330	930	206	307	700	Oil, cottonseed, and cake.	1914	11	578	4,312	231	5,408	6,522
	1909	16	374	714	200	380	882		1909	9	419	3,902	161	3,509	4,316
	1904	15	470	.....	202	490	971		1904	11	485	.....	181	2,201	2,981
Confectionery.	1914	13	272	734	118	733	1,248	Patent medicines and compounds and drug- gists' preparations.	1914	1 24	155	293	62	760	1,663
	1909	9	297	02	123	830	1,128		1909	21	70	17	20	360	639
	1904	7	186	.....	82	442	849		1904	2 8	42	.....	14	174	374
Copper, tin, and sheet- iron products.	1914	6 17	74	38	50	132	327	Printing and publishing.	1914	10 50	525	699	475	611	2,104
	1909	14	114	5	68	111	242		1909	45	516	622	407	520	1,703
	1904	11	100	.....	77	129	292		1904	2 40	423	.....	278	382	1,322
Foundry and machine- shop products.	1914	6 20	437	637	204	609	1,270	All other industries.	1914	130	4,111	9,405	2,475	11,684	19,738
	1909	18	437	1,557	284	565	1,130		1909	133	3,817	9,039	2,058	8,071	15,073
	1904	15	446	.....	256	372	881		1904	124	3,754	.....	1,722	5,451	9,488
Ice, manufactured.	1914	6	377	2,090	201	107	506								
	1909	6	272	1,726	154	80	495								
	1904	4	179	.....	110	40	310								

<sup>1</sup> Includes "perfumery and cosmetics."<sup>2</sup> Excludes statistics for 1 establishment, to avoid disclosure of individual operations.<sup>3</sup> Includes "bookbinding and blank-book making"; "engraving, steel and copper plate, including plate printing"; and "lithography."<sup>4</sup> Includes "sausage, not made in slaughtering and meat-packing establishments."<sup>5</sup> Includes "stamped and enameled ware, not elsewhere specified."<sup>6</sup> Includes "automobile repairing" and "structural ironwork, not made in steel works or rolling mills."<sup>7</sup> Includes "saddlery and harness" and "trunks and valises."<sup>8</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.<sup>9</sup> Includes "boxes, wooden packing," "lumber, planing-mill products, not including planing mills connected with sawmills" and "window and door screens."<sup>10</sup> Includes "bookbinding and blank-book making."

## MANUFACTURES—TENNESSEE.

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TABLE 34.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost. of ma- terials.	Value of prod- ucts.	INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of ma- terials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		

## CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

<b>NASHVILLE—All in- dustries.</b>	1914	354	8,573	21,930	\$4,321	\$19,361	\$33,276	<b>NASHVILLE—Contd.</b>	1914	8	290	803	\$155	\$261	\$530
	1909	384	9,721	19,538	4,336	17,456	29,650		1909	5	476	463	204	248	673
	1904	257	8,032	.....	3,224	12,482	21,567		1904	6	458	.....	199	289	639
Bread and other bakery products.	1914	18	109	105	55	570	744	Leather goods.....	1914	<sup>4</sup> 13	188	161	92	423	653
	1909	23	87	65	49	203	336		1909	11	182	93	86	508	739
	1904	14	119	.....	45	208	586		1904	<sup>6</sup> 7	209	.....	76	330	564
Carriages and wagons and materials.	1914	13	172	187	98	236	431	Lumber and timber prod- ucts.	1914	<sup>6</sup> 23	786	4,550	326	1,264	2,097
	1909	17	193	148	96	158	337		1909	25	1,244	3,352	547	1,539	2,673
	1904	<sup>1</sup> 11	168	.....	81	169	319		1904	19	1,015	.....	358	1,635	2,413
Clothing, men's, includ- ing shirts.	1914	6	369	123	130	387	758	Mattresses and spring beds.	1914	4	66	109	27	101	195
	1909	5	398	127	112	522	836		1909	4	71	111	27	103	187
	1904	7	528	.....	121	424	768		1904	3	42	.....	14	70	130
Confectionery.....	1914	11	143	94	54	278	455	Patent medicines and compounds and drug- gists' preparations.	1914	<sup>7</sup> 12	65	18	31	173	341
	1909	11	283	131	63	315	454		1909	14	30	13	10	82	206
	1904	9	105	.....	50	248	583		1904	7	41	.....	10	110	280
Copper, tin, and sheet- iron products.	1914	<sup>2</sup> 12	81	19	43	53	130	Printing and publishing..	1914	<sup>8</sup> 75	1,060	1,044	679	1,019	3,555
	1909	12	68	16	30	75	160		1909	86	1,235	1,227	728	896	3,285
	1904	<sup>1</sup> 4	59	.....	37	44	114		1904	54	1,045	.....	552	591	2,292
Flour-mill and gristmill products.	1914	7	237	3,150	97	4,202	5,042	All other industries.....	1914	129	4,750	11,098	2,367	10,036	17,533
	1909	10	243	2,227	89	4,888	5,719		1909	150	5,069	11,372	2,215	7,805	13,715
	1904	4	178	.....	86	3,690	4,242		1904	103	3,813	.....	1,512	4,531	8,334
Foundry and machine- shop products.	1914	<sup>3</sup> 19	257	469	167	349	757								
	1909	11	142	193	80	114	280								
	1904	0	102	.....	83	143	208								

## CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

CHATTANOOGA.....	1914	276	7,182	21,227	\$3,836	\$10,753	\$20,369	KNOXVILLE.....	1914	142	2,420	6,168	\$1,063	\$4,356	\$7,346
	1909	185	6,410	17,509	2,816	8,434	16,036		1909	<sup>9</sup> 156	2,362	4,816	887	4,998	7,769
	1904	177	6,420	.....	2,594	7,474	14,201		1904	138	2,699	.....	1,048	4,101	6,699
JACKSON.....	1914	46	1,509	3,858	856	1,840	3,417								
	1909	42	1,405	2,789	673	1,215	2,710								
	1904	42	1,268	.....	498	1,183	2,318								

<sup>1</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.<sup>2</sup> Includes "stamped and enameled ware, not elsewhere specified."<sup>3</sup> Includes "automobile repairing" and "structural ironwork, not made in steel works or rolling mills."<sup>4</sup> Includes "saddlery and harness" and "trunks and valises."<sup>5</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.<sup>6</sup> Includes "boxes, wooden packing;" "lumber, planing-mill products, not including planing mills connected with sawmills;" and "window and door screens."<sup>7</sup> Includes "perfumery and cosmetics."<sup>8</sup> Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."<sup>9</sup> Figures do not agree with those published in 1909, because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

TABLE 35.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

## THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

		4,775	88,514	5,142	3,092	4,780	1,127	74,373	Ap 77,312	De 68,203	( <sup>1</sup> )	( <sup>2</sup> )	( <sup>3</sup> )	( <sup>4</sup> )	( <sup>5</sup> )	\$211,423,167
1	All industries.....															
2	Agricultural implements.....	17	582	14	18	23	10	517	Ja 621	No 464	539	537	2			1,727,111
3	Artificial limbs.....	5	0	5	1			3	Ja 43	Ja 43	3	3				10,550
4	Artificial stone products.....	21	238	22	8	4	2	202	Ja 303	Ja 45	225	225		1		128,081
5	Automobile repairing.....	13	64	14		3	1	46	Ja 47	Ja 44	46	46				69,841
6	Awnings, tents, and sails.....	10	58	8	6	3		41	Ja 50	Ja 27	46	20	17			69,923
7	Bags, other than paper.....	4	536		14	41	10	471	Ja 581	No 305	498	154	337	1	0	1,588,086
8	Belting, leather.....	4	21	5	2	2		14	Ja 15	Ja 12	14	14				50,341
9	Bookbinding and blank-book making.....	8	38	10		1		27	Ja 28	Oc 25	20	10	10			30,140
10	Boxes and cartons, paper.....	8	323	2	20	15	5	281	Ja 321	De 248	278	135	140	2	1	320,351
11	Bread and bakery products.....	151	1,503	160	43	107	32	1,152	Ja 1,152	Ja 303	1,156	816	330	8	2	1,743,300
12	Biscuit and crackers.....	3	500		4	08	6	431	Ja 477	Ja 303	435	173	202			520,818
13	All other.....	148	694	160	39	39	26	721	Ja 752	Ja 604	721	643	68	8	2	1,222,581
14	Brick and tile, terra-cotta, and fire-clay products.....	72	1,833	76	65	44	8	1,640	Ja 2,051	Ja 1,174	1,950	1,907		43		3,008,183
15	Brooms.....	30	168	30	6	6	1	116	Ja 122	Oc 112	130	121	7	2		95,155
16	Canning and preserving, fruits and vegetables.....	62	496	92	15	6	2	381	Ja 1,304	Ja 28	1,412	415	801	60	46	297,420
17	Carriage and wagon materials.....	27	734	22	31	19	5	657	Ja 725	De 470	671	662	6	3		1,362,082
18	Carrriages, wagons, and repairs.....	81	895	112	38	21	10	714	Ja 775	De 577	721	716	4	1		1,881,085
19	Carrriages and wagons.....	76	885	106	38	21	10	710	Ja 775	De 577	717	712	4	1		1,874,920
20	Repair work only.....	5	10	6				4	Ja 44	Ja 44	4	4				6,175
21	Cars and general shop construction and repairs by electric-railroad companies.....	6	335		5	8	1	321	Ap 355	Fe 285	321	317	4			360,031
22	Cars and general shop construction and repairs by steam-railroad companies.....	17	7,610		102	203	14	7,201	Ap 7,420	No 0,734	7,221	7,206	15			6,028,029
23	Clothing, men's and youths'.....	26	1,806	12	55	136	14	1,580	Fe 1,715	No 1,355	1,627	228	1,364	10	25	1,778,953
24	Coffee, roasting and grinding.....	7	158	3	12	45	6	92	Ja 111	No 68	105	46	59			495,293
25	Coffins, burial cases, and undertakers' goods.....	8	503		27	55	10	411	Ja 422	No 393	415	301	24			1,358,006
26	Coke, not including gas-house coke.....	5	183		9	4		170	Ja 186	Ap 150	197	197				661,358
27	Confectionery and ice cream.....	58	1,203	43	79	184	42	920	Ja 823	Ja 732	987	919	365	2	1	1,843,243
28	Confectionery and chewing gum.....	35	1,051	20	56	165	36	774	Ja 823	Ja 732	820	468	350	1	1	1,520,710
29	Ice cream.....	23	217	23	23	19	0	148	Ja 108	Ja 67	167	151	15	1		313,533
30	Cooperage and wooden goods, not elsewhere specified.....	22	540	21	14	7	1	500	Mh 522	Ja 492	512	490	10	6		506,367
31	Copper, tin, and sheet-iron work.....	62	427	73	18	24	5	367	Ja 334	Mh 268	304	304				418,554
32	Cordials and flavoring sirups.....	9	38	7	7	9	3	12	Oc 14	Ja 10	13	13				102,012
33	Cotton goods.....	15	3,484		44	31	6	3,403	Oc 3,473	Mh 3,334	3,454	1,721	1,374	102	107	7,142,847
34	Druggists' preparations.....	0	193	6	18	57	6	108	Mh 100	De 102	103	46	57			531,553
35	Dye-stuffs and extracts.....	6	397		19	12	1	365	No 399	Ja 321	389	389				2,101,854
36	Fertilizers.....	15	830		28	91	9	706	Ap 1,201	Ja 446	717	717				6,460,467
37	Flour-mill and gristmill products.....	512	2,503	693	167	166	40	1,497	Ap 1,626	My 1,367	1,532	1,524	0	2		10,338,047
38	Food preparations not elsewhere specified.....	33	708	26	49	155	15	523			590	574	16			2,802,798
39	Breadstuff preparations, hard compounds, and sweetening sirups.....	11	413	6	21	104	8	274	Oc 385	Ja 199	260	251	0			1,849,035
40	Other food products for human consumption.....	8	37	7	2	4		24	De 25	Ja 23	24	19	5			24,214
41	For animals and fowls.....	14	318	13	26	47	7	225	De 307	Ja 102	306	304	2			1,019,519
42	Foundry and machine-shop products.....	100	3,613	79	181	208	73	3,072			3,020	3,011	7	2		7,885,782
43	Boiler shops and foundries.....	27	1,558	17	68	85	22	1,906	Ap 1,486	No 1,167	1,324	1,315	7	2		2,521,439
44	Machine shops.....	79	2,055	62	113	123	51	1,706	Ja 1,792	De 1,500	1,696	1,696				5,364,313
45	Furniture and refrigerators.....	58	2,439	47	95	106	19	2,172	My 2,508	De 1,618	2,207	2,153	29	12	13	4,634,602
46	Gas, illuminating and heating.....	12	640		22	103	15	506	My 595	Mh 394	539	539				13,634,170
47	Hosiery and knit goods.....	26	5,872	1	80	61	40	5,690	Ap 6,091	De 5,201	5,700	1,886	3,343	185	280	6,064,071
48	Ice, manufactured.....	70	1,147	41	93	71	15	927	Ja 1,337	Ja 478	999	999	4	1		5,566,740
49	Iron and steel, blast furnaces.....	6	571	1	23	42	2	503	Ja 639	De 396	647	638		0		3,936,893
50	Jewelry.....	8	35	0	1		1	34	Ja 34	Ja 34	34	34	3		1	50,822
51	Line.....	9	462	8	20	2		432	Ap 448	Fe 412	442	442				431,145
52	Liquors, malt.....	4	389	19	10	18	5	337	Ja 422	De 181	361	361				2,081,889
53	Lumber and timber products.....	1,821	17,561	2,356	368	340	47	14,452	Mh 15,184	De 12,769	10,002	18,880	1	112		22,669,433
54	Lumber, planing-mill products, not including planing mills connected with sawmills.....	134	3,461	116	163	140	30	3,012	Ja 3,212	De 2,724	3,101	2,884	188	23	6	6,055,005
55	Marble and stone work.....	97	1,400	90	42	35	11	1,273	Ja 1,353	De 1,196	1,304	1,304				1,473,553
56	Mattresses and spring beds.....	20	401	16	26	33	10	316	Ja 339	De 257	322	272	47	3		629,750
57	Millinery and lace goods.....	5	74	2	7	3	2	60	Fe 64	De 54	62	16	28	7	11	204,803
58	Mineral and soda waters.....	86	426	75	41	28	6	276	Ja 365	De 208	306	299	1	6		707,051
59	Oil, cottonseed, and cake.....	24	1,270	1	71	136	8	1,054	No 1,057	Ap 398	1,825	1,812	13			5,076,407
60	Optical goods.....	5	39	8	6	3	5	17	No 18	Ja 16	17	15	2			66,309
61	Paints.....	9	134	3	19	18	10	84	Ap 91	Ja 72	76	68	8			532,906

<sup>1</sup> Owned power only.<sup>2</sup> Includes rented power, other than electric.<sup>3</sup> No figures shown for reasons given in "Explanation of terms."



## MANUFACTURES—TENNESSEE.

1455

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914.

EXPENSES.								Value of products	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>	Electric (rented).	

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$5,780,573	\$6,030,118	\$33,082,087	\$2,100,640	\$755,924	\$2,768,400	\$118,301,172	\$5,128,063	\$212,071,480	\$88,641,354	286,857	216,156	3,448	9,305	57,858	25,249	1
48,410	40,203	252,016	.....	.....	13,782	365,044	26,038	1,121,694	730,612	1,450	810	27	.....	013	40	2
1,000	.....	1,140	.....	1,058	11	2,611	150	15,123	12,353	6	.....	.....	.....	6	.....	3
12,091	8,801	84,390	185	1,169	1,143	158,050	2,825	300,323	130,439	250	188	40	.....	22	.....	4
.....	2,470	34,794	.....	7,767	546	18,177	2,459	94,619	73,983	119	32	4	.....	83	.....	5
8,136	1,830	20,366	45	3,941	387	103,547	921	109,610	65,148	19	.....	.....	.....	19	.....	6
42,543	81,004	156,460	.....	792	7,753	2,797,564	8,708	3,245,504	430,142	305	.....	.....	.....	305	.....	7
2,240	1,094	10,752	.....	2,190	209	79,756	1,079	115,055	34,220	54	15	.....	.....	39	.....	8
.....	720	12,732	.....	2,600	109	6,912	640	40,055	32,503	12	.....	.....	.....	12	.....	9
34,133	22,090	92,280	.....	7,040	2,005	336,346	5,337	569,076	227,393	213	30	.....	.....	183	.....	10
83,650	133,502	527,328	1,875	67,708	15,350	2,334,503	57,842	4,032,604	1,700,319	887	230	14	.....	643	93	11
16,045	90,219	150,168	.....	13,300	3,962	677,514	13,007	1,270,315	585,794	314	185	.....	.....	129	90	12
67,611	37,343	377,100	1,875	54,498	11,388	1,650,959	44,835	2,816,949	1,114,525	573	45	14	.....	514	3	13
104,013	34,297	704,444	10,853	2,350	12,469	222,271	282,746	1,637,972	1,132,955	4,892	4,324	70	.....	408	.....	14
5,565	3,560	63,562	500	4,204	887	132,895	1,959	252,349	117,495	53	.....	18	.....	35	.....	15
7,716	4,525	61,785	926	912	1,226	350,459	4,487	406,225	135,279	738	717	21	.....	.....	.....	16
50,637	21,724	205,903	1,004	802	8,606	670,038	8,867	1,282,377	603,472	3,099	2,859	10	.....	230	.....	17
67,740	32,646	378,453	202	23,380	13,201	590,941	21,484	1,395,004	770,579	1,122	561	99	.....	402	10	18
67,740	32,646	378,453	202	22,080	13,244	591,316	21,188	1,379,780	767,285	1,112	561	91	.....	400	10	19
.....	.....	2,264	.....	400	47	5,625	290	15,215	0,294	10	.....	8	.....	2	.....	20
8,050	7,380	132,874	.....	.....	7,245	145,319	2,267	300,852	153,266	441	.....	.....	.....	441	75	21
157,027	271,445	4,622,354	.....	.....	22,455	4,447,015	139,333	9,688,409	5,102,061	6,323	4,106	40	.....	2,177	2,601	22
99,404	171,115	457,984	53,407	10,664	6,608	1,611,083	13,500	2,872,617	1,247,134	561	157	10	75	319	.....	23
45,650	92,785	39,825	.....	14,468	4,079	1,193,456	6,310	1,048,190	448,433	331	25	.....	.....	306	.....	24
54,687	68,400	227,447	1,280	.....	8,971	520,714	10,960	1,145,594	608,220	961	930	.....	.....	31	.....	25
9,670	3,360	74,461	.....	.....	3,064	6,062	507,098	605,084	91,024	493	485	8	.....	.....	.....	26
137,813	210,469	332,858	160	50,536	13,112	2,236,639	44,009	3,755,480	1,478,742	1,895	547	10	.....	1,338	60	27
104,575	196,086	300,074	40	41,820	15,320	1,821,465	28,409	2,989,607	1,130,573	1,247	869	.....	.....	878	60	28
33,238	14,383	82,784	120	14,716	2,783	414,174	15,030	708,073	339,109	648	178	10	.....	460	.....	29
17,812	6,800	122,646	22,126	1,068	3,590	491,577	1,799	687,005	194,589	991	970	4	.....	17	225	30
28,811	23,496	185,139	1,038	19,870	2,590	342,940	3,626	789,760	443,185	62	.....	5	.....	57	.....	31
12,371	9,220	7,637	.....	5,632	735	118,540	778	229,276	109,958	40	.....	10	.....	30	.....	32
93,208	35,584	1,045,920	5,682	17	34,107	4,412,106	141,963	6,485,640	1,931,571	12,311	9,428	.....	225	2,658	687	33
36,970	58,545	43,716	.....	4,802	4,030	349,091	1,230	685,027	333,800	20	.....	.....	.....	20	.....	34
46,249	14,248	173,358	.....	15,190	674,683	95,535	1,535,507	765,285	4,065	4,065	3,605	400	.....	.....	394	35
70,235	125,772	329,174	9,376	3,416	21,535	2,537,847	53,802	4,372,427	1,780,688	3,752	1,052	25	.....	1,775	208	36
229,403	200,141	642,485	4,733	11,273	62,592	21,840,248	225,473	40,413,574	4,341,853	28,245	16,746	930	7,607	2,873	148	37
94,532	165,282	242,442	45,061	8,714	18,266	8,152,765	111,058	9,955,350	1,691,527	4,886	2,315	90	.....	2,481	5	38
42,168	110,508	115,384	37,932	1,403	9,409	5,834,229	39,834	6,843,847	969,784	1,666	975	.....	.....	601	.....	39
1,974	2,681	9,045	67	1,740	501	42,777	720	68,630	25,133	14	.....	.....	.....	14	.....	40
50,390	52,093	118,013	7,062	5,571	8,266	2,275,759	70,504	3,042,873	696,610	3,206	1,340	90	.....	1,776	5	41
366,258	329,950	1,669,195	17,583	25,148	52,345	2,821,626	147,551	6,345,881	3,376,704	7,545	3,521	84	20	3,920	1,009	42
156,566	107,285	650,964	3,064	4,735	16,070	1,178,671	70,084	2,739,180	1,484,425	2,624	1,102	15	20	1,487	153	43
209,002	222,665	1,018,231	14,519	20,413	30,275	1,642,955	71,467	3,608,701	1,892,279	4,921	2,410	99	.....	2,433	856	44
175,066	143,563	959,013	6,416	13,162	24,801	1,670,613	47,705	3,739,558	2,012,180	6,187	3,690	84	.....	2,413	552	45
46,125	97,851	292,127	.....	180	04,414	170,060	348,243	1,571,006	1,052,703	655	645	.....	.....	10	.....	46
183,660	130,335	1,537,474	62,750	8,323	23,016	4,323,380	75,790	7,522,846	3,123,676	4,754	3,203	.....	.....	1,551	134	47
131,256	62,357	492,037	930	14,805	38,660	155,440	249,548	1,702,193	1,357,205	13,050	12,446	19	90	501	310	48
49,447	27,345	232,912	985	14,227	856,942	824,993	824,993	2,245,329	563,304	6,880	6,580	.....	.....	.....	47	49
500	300	30,542	.....	6,110	39,272	855	57,130	97,257	57,130	10	.....	.....	.....	10	.....	50
35,290	1,140	136,599	17,000	2,695	2,423	51,107	56,440	356,829	249,282	670	520	150	.....	.....	.....	51
43,403	41,593	228,305	1,046	.....	180,481	433,404	56,415	1,345,386	855,507	2,755	2,755	.....	.....	.....	758	52
623,065	366,875	5,120,412	1,456,083	22,210	112,153	9,138,847	53,792	21,679,782	12,487,143	69,788	67,823	440	956	569	1,576	53
270,648	169,201	1,353,140	22,522	10,798	41,678	4,509,369	50,995	7,869,496	3,290,162	11,513	9,693	66	80	1,675	70	54
71,813	33,566	632,370	30,571	8,791	8,382	450,571	63,449	1,689,315	1,169,295	4,601	3,364	132	.....	1,105	165	55
52,282	50,430	148,808	12	14,972	3,933	525,729	13,084	981,407	442,594	750	100	.....	.....	650	.....	56
12,600	3,804	21,518	.....	4,836	1,515	61,909	664	131,943	69,370	4	.....	.....	.....	4	.....	57
61,663	26,196	140,036	1,369	11,271	11,859	750,181	11,212	1,263,123	492,755	477	221	54	3	199	5	58
161,709	108,159	418,517	5,881	388	30,107	9,059,085	112,404	11,414,213	2,212,754	10,802	10,659	123	.....	20	568	59
7,775	3,228	8,289	.....	3,240	44,405	378,212	946	89,171	43,730	12	.....	.....	.....	12	.....	60
32,764	29,716	48,158	400	2,380	3,268	.....	10,994	620,880	231,633	1,180	940	.....	.....	240	350	61

\* Same number reported throughout the year.

\* Same number reported for one or more other months.

## MANUFACTURES—TENNESSEE.

TABLE 35.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

## THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

62	Patent medicines and compounds..	62	1,013	29	78	294	120	516	My	569	Do	431	519	234	268	2	15	\$3,007,693
63	Paving materials.....	12	218	8	13	4	1	223	Jo	261	Do	100	223	223	.....	.....	.....	226,750
64	Perfumery and cosmetics.....	11	40	5	0	7	5	26	Ap	33	Ja	19	26	8	15	2	1	131,853
65	Photo-engraving.....	6	56	.....	8	.....	0	42	My	44	No	41	40	37	1	2	.....	39,725
66	Pottery.....	5	61	4	0	2	1	48	Fe	84	Do	30	08	68	.....	.....	.....	216,940
67	Printing and publishing, book and job.....	142	1,598	124	100	143	61	1,161	.....	.....	.....	.....	1,161	901	260	3	.....	2,095,332
68	Job printing.....	133	1,556	121	105	140	61	1,129	My	1,162	No	1,092	1,121	858	200	3	.....	2,000,710
69	Book publishing and printing, including linotype work.....	0	42	3	.....	3	.....	12	Do	43	Au	25	43	43	.....	.....	.....	94,016
70	Printing and publishing, newspapers and periodicals.....	282	2,417	205	126	431	155	1,440	.....	.....	.....	.....	1,425	1,228	183	13	1	5,063,767
71	Printing and publishing.....	24	782	14	35	192	49	492	Do	503	Se	485	400	446	14	.....	.....	1,587,237
72	Printing, publishing and job printing.....	193	1,428	211	50	108	51	942	Se	959	Au	929	959	770	169	13	1	3,044,269
73	Publishing without printing.....	65	207	40	35	71	55	0	.....	46	.....	46	6	6	.....	.....	.....	432,261
74	Saddlery and harness.....	63	537	01	30	46	11	413	Fe	509	Au	313	408	434	18	10	0	1,228,908
75	Sausage.....	7	29	10	.....	.....	.....	19	Ja	21	Au	17	21	21	.....	.....	.....	14,950
76	Shirts.....	0	72	3	4	0	1	58	Mh	65	Jy	46	56	2	42	2	10	44,960
77	Slaughtering and meat packing.....	18	255	25	12	15	4	199	No	278	Ap	172	305	282	23	.....	.....	567,628
78	Stoves, hot-air furnaces, and ranges.....	13	1,722	17	54	188	51	1,412	Ap	1,532	Do	1,262	1,490	1,479	.....	11	.....	2,453,946
79	Structural ironwork, not made in steel works or rolling mills.....	13	450	0	27	39	5	370	Ja	503	Do	253	410	410	.....	.....	.....	1,330,276
80	Tobacco, cigars and cigarettes.....	25	240	30	3	8	1	198	Ja	234	No	175	190	170	26	3	.....	174,945
81	Trunks and valises.....	7	134	5	10	13	2	104	Fe	128	No	73	96	83	8	5	.....	182,768
82	Vinegar and cider.....	6	66	4	5	27	1	28	Mh	32	My	25	28	28	.....	.....	.....	268,182
83	Wood, turned and carved.....	24	614	18	25	12	4	555	Ja	600	My	484	604	571	26	7	.....	551,086
84	Woolen goods.....	17	1,123	13	25	12	4	1,069	Ja	1,190	Do	946	1,155	613	476	43	23	1,984,594
85	All other industries*.....	228	9,136	157	359	614	131	7,875	.....	.....	.....	.....	.....	.....	.....	.....	.....	55,782,569

*All other industries embrace—	Cement.....	2	Engines, steam, gas, and water.....	3	Hair work.....	2	
Automobile bodies and parts.....	3	Charcoal, not including production in the lumber and wood distillation industries.....	2	Engraving, steel and copper plate, including plate printing.....	2	Hand stamps.....	3
Automobiles.....	1	Chemicals.....	3	Explosives.....	2	Hardware.....	1
Babbitt metal.....	1	Cleaning and polishing preparations.....	3	Flavoring extracts.....	6	Hardware, saddlery.....	1
Baking powders.....	2	Clothing, women's.....	1	Furnishing goods, men's.....	3	House-furnishing goods, not elsewhere specified.....	3
Blacking, stains, and dressings.....	2	Cordage and twine.....	2	Gas fixtures.....	3	Iron, printing.....	1
Boots and shoes.....	2	Corsets.....	1	Gas machines and gas and water meters.....	2	Iron and steel, steel works and rolling mills.....	1
Boxes, wooden, packing.....	13	Dairymen's supplies.....	1	Glass.....	1	Iron and steel, cast-iron pipe.....	2
Brass and bronze products.....	3	Dyeing and finishing textiles.....	2	Glass, cutting, staining, and ornamenting.....	1	Iron and steel, doors and shutters.....	1
Brushes, toilet.....	1	Electrical machinery, apparatus, and supplies.....	3	Grocery and tallow, not including lubricating greases.....	1	Leather, tanned, curried, and finished.....	9
Butter.....	2	Electroplating.....	1		1	Lithography.....	1
Buttons.....	2					Looking-glass and picture frames.....	2
Carpets, rug.....	1						
Cars, steam-railroad, not including operations of railroad companies.....	2						

## CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

1	MEMPHIS—All industries.....	354	10,260	256	459	978	187	8,389	Mh	8,776	Do	7,960	9,070	8,247	800	10	13	\$14,435,414
2	Artificial limbs.....	3	0	2	1	.....	.....	3	.....	43	.....	43	3	3	.....	.....	.....	0,275
3	Bookbinding and blank-book making.....	3	23	3	.....	1	.....	19	Do	20	No	18	20	14	6	.....	.....	17,625
4	Bread and other bakery products.....	45	661	30	14	68	9	531	Jy	560	Ja	404	538	333	205	.....	.....	883,467
5	Brooms.....	5	54	5	3	2	1	43	No	47	Jo	40	44	39	5	.....	.....	27,348
6	Carriages and wagons and materials.....	10	378	4	16	14	5	399	Se	414	Do	282	321	320	.....	1	.....	1,156,363
7	Confectionery and ice cream.....	10	451	10	33	87	13	308	.....	292	Jy	245	327	206	121	.....	.....	821,119
8	Confectionery and chewing gum.....	13	390	7	26	83	11	272	Do	292	Jy	245	284	166	118	.....	.....	707,356
9	Ice cream.....	3	62	3	7	4	2	35	Jy	72	Do	18	43	40	3	.....	.....	113,793
10	Copper, tin, and sheet-iron work.....	17	117	17	11	13	2	74	Se	82	Ja	60	68	68	.....	.....	.....	206,233
11	Cordials and flavoring syrups.....	6	22	3	4	3	3	9	Mh	11	No	8	10	10	.....	.....	.....	48,872
12	Flour-mill and gristmill products.....	4	81	1	11	6	.....	63	Mh	69	Do	56	61	61	.....	.....	.....	331,125
13	Food preparations, not elsewhere specified.....	6	241	8	11	20	4	180	Do	205	Se	130	295	263	2	.....	.....	790,340
14	Foundry and machine-shop products.....	20	499	10	20	18	8	437	Ja	559	Do	272	427	427	.....	.....	.....	1,029,701
15	Ice, manufactured.....	6	424	.....	19	24	4	377	Au	567	Ja	187	303	300	3	.....	.....	744,840
16	Leather goods, not elsewhere specified.....	11	80	8	9	6	.....	58	Ja	84	Se	37	01	56	5	.....	.....	244,874
17	Lumber and timber products.....	17	1,064	8	44	69	11	932	Ap	1,015	Do	713	887	887	.....	.....	.....	2,826,724
18	Marble and stone work.....	7	80	0	3	1	2	74	No	70	Mh	70	76	76	.....	.....	.....	64,053
19	Mattresses and spring beds.....	5	175	3	10	19	5	138	Jo	147	Do	113	150	128	22	.....	.....	263,048
20	Mineral and soda waters.....	4	66	1	3	0	1	52	Se	62	No	44	54	54	.....	.....	.....	65,825
21	Oil, cottonseed, and cake.....	11	977	1	34	59	5	578	Do	986	Au	210	988	976	12	.....	.....	2,276,492
22	Paints.....	4	78	3	10	13	4	48	Se	51	Do	47	47	42	5	.....	.....	275,952

1 Owned power only.

2 Includes rented power, other than electric.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>	Electric (rented).	

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

\$180,823	\$521,238	\$106,520	\$1,438	\$20,706	\$34,837	\$1,384,895	\$7,810	\$4,025,646	\$2,632,941	736	156	3	-----	577	-----	62
17,280	3,984	87,692	553	2,673	982	36,472	11,946	212,019	163,001	1,189	818	41	-----	330	-----	63
11,300	11,717	8,455	-----	2,342	2,033	79,511	625	231,772	151,636	46	4	-----	-----	42	-----	64
11,650	3,675	38,084	600	4,568	208	12,890	1,501	97,222	82,771	23	-----	-----	-----	23	-----	65
6,143	2,002	19,006	-----	-----	1,020	7,444	7,005	57,450	42,110	303	300	3	-----	-----	-----	66
233,160	175,571	905,173	38,037	90,170	13,836	930,320	32,238	2,661,955	1,099,397	1,128	25	17	1	1,085	69	67
223,052	173,291	876,946	19,712	87,311	13,193	926,413	29,571	2,845,292	1,889,278	1,119	25	17	1	1,076	69	68
10,108	2,280	28,227	18,325	2,859	643	3,907	2,667	116,693	110,119	9	-----	-----	-----	9	-----	69
241,482	558,409	930,270	188,247	71,699	32,835	1,268,311	53,105	5,077,180	3,755,764	1,095	225	171	10	1,289	27	70
105,551	231,437	387,776	7,084	19,316	16,961	582,096	21,468	2,107,323	1,503,759	640	188	6	-----	446	27	71
85,170	241,168	538,458	3,236	45,581	15,176	631,185	31,024	2,400,174	1,746,965	1,054	37	165	10	842	-----	72
50,755	85,894	4,030	177,927	6,802	698	55,030	613	560,683	505,040	1	-----	-----	-----	1	-----	73
46,685	46,332	226,228	1,000	20,018	5,347	1,043,184	8,632	1,024,813	572,997	328	50	25	1	252	-----	74
-----	-----	12,570	-----	1,456	158	80,138	1,802	122,144	40,204	65	40	-----	-----	25	-----	75
7,600	5,885	19,302	-----	2,860	160	30,599	725	92,055	60,731	18	-----	-----	-----	18	-----	76
17,315	10,414	87,357	2,750	684	4,604	1,540,077	21,371	1,839,091	327,643	1,213	1,107	4	-----	102	-----	77
120,734	184,416	866,831	21,798	5,930	32,055	921,061	64,535	2,795,359	1,899,763	1,038	445	-----	-----	1,193	4	78
44,850	39,857	280,328	-----	10,632	6,500	739,156	25,278	1,554,001	790,167	1,392	750	2	-----	640	1,488	79
4,019	10,606	106,908	-----	3,180	30,895	113,436	550	322,278	208,283	75	-----	-----	-----	75	-----	80
14,600	13,300	33,463	-----	4,520	991	105,424	1,558	226,307	119,325	100	47	-----	-----	53	-----	81
10,600	62,687	14,750	-----	3,970	1,027	212,350	2,762	391,954	176,842	86	45	4	-----	37	-----	82
34,159	13,088	237,417	850	505	3,573	534,031	1,845	908,528	372,652	1,790	1,728	20	-----	36	-----	83
38,078	25,532	288,557	408	460	11,282	893,867	29,447	1,540,501	623,277	2,302	1,412	37	45	808	159	84
780,417	876,272	3,827,672	62,003	71,887	1,623,420	15,029,767	915,581	31,217,143	14,671,795	52,704	31,752	129	192	20,631	13,412	85

Lubricating greases.....	1	Roofing materials.....	1	Statuary and art goods.....	1	Toys and games.....	2
Minerals and earths, ground.....	3	Saws.....	4	Steam fittings and steam and hot-water heating apparatus.....	1	Typewriters and supplies.....	1
Mirrors, framed and unframed.....	4	Scales and balances.....	1	Stencils and brands.....	2	Umbrellas and canes.....	1
Models and patterns, not including paper patterns.....	4	Shipbuilding, wooden, including boat building.....	3	Stereotyping and electrotyping.....	3	Upholstering materials, not elsewhere specified.....	2
Oil, essential.....	1	Show cases.....	1	Sulphuric, nitric, and mixed acids.....	1	Wall plaster.....	1
Oil, not elsewhere specified.....	1	Signs and advertising novelties.....	8	Surgical appliances.....	2	Wheelbarrows.....	1
Pickles and sauces.....	1	Smelting and refining, copper.....	2	Suspenders, garters, and elastic woven goods.....	3	Window and door screens.....	4
Poultry, killing and dressing.....	4	Soap.....	3	Tinware, not elsewhere specified.....	6	Window shades and fixtures.....	1
Printing and publishing, music.....	2	Soda-water apparatus.....	2	Tobacco, chewing and smoking, and snuff.....	20	Wirework.....	3
Printing materials.....	1	Stamped and enameled ware, not elsewhere specified.....	3	Tools, not elsewhere specified.....	1	Wood distillation, not including turpentine and resin.....	1
Regalia and society badges and emblems.....	1	Stationery goods, not elsewhere specified.....	2			Wool shoddy.....	1
Rice, cleaning and polishing.....	1						

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$971,978	\$1,281,316	\$4,901,358	\$48,593	\$223,857	\$1,052,952	\$22,400,401	\$604,506	\$30,133,497	\$10,128,500	24,693	19,094	284	-----	5,315	3,683	1
1,000	-----	1,140	-----	758	10	2,036	99	8,123	5,988	4	-----	-----	-----	4	-----	2
-----	720	8,824	-----	1,180	77	6,025	441	27,210	20,744	6	-----	-----	-----	6	-----	3
35,835	85,982	237,314	1,700	34,402	7,451	817,322	25,960	1,709,399	866,117	334	185	3	-----	146	93	4
3,795	2,500	21,620	-----	2,068	689	57,055	857	103,664	45,752	15	-----	6	-----	9	-----	5
40,065	20,393	205,521	-----	5,000	11,648	360,411	6,177	796,265	429,677	930	799	-----	-----	131	10	6
53,739	99,028	142,985	40	30,014	6,046	781,285	20,920	1,427,753	625,548	850	205	-----	-----	555	60	7
41,439	94,654	117,730	40	22,810	5,558	720,300	12,955	1,247,809	514,554	734	220	-----	-----	514	60	8
12,300	4,374	25,255	-----	7,204	488	60,985	7,965	179,944	110,994	116	75	-----	-----	41	-----	9
19,743	14,425	59,000	-----	8,542	1,739	129,963	1,934	326,745	194,848	38	-----	4	-----	34	-----	10
8,271	4,100	6,607	-----	4,844	349	67,736	640	134,175	65,799	35	-----	10	-----	25	-----	11
15,015	4,040	36,229	-----	600	2,807	1,131,412	11,119	1,253,008	110,477	1,114	1,075	4	-----	35	-----	12
19,416	34,452	98,753	3,056	1,200	8,077	2,987,461	41,268	3,464,786	436,057	1,812	1,165	-----	-----	647	-----	13
32,076	28,799	264,122	-----	6,608	7,121	585,941	23,162	1,275,953	666,850	637	578	9	-----	50	1,293	14
40,000	26,778	200,830	-----	10,000	14,319	14,954	92,334	506,236	398,948	2,090	2,925	-----	-----	65	125	15
15,420	6,135	35,930	-----	7,525	1,537	172,304	1,890	282,765	108,571	59	-----	25	-----	34	-----	16
95,198	87,781	537,468	15,032	5,658	16,066	1,565,484	11,350	2,960,963	1,384,069	4,262	3,950	-----	-----	312	1,151	17
7,200	2,580	64,346	-----	420	442	36,390	4,550	138,567	97,627	115	80	-----	-----	35	20	18
25,522	35,026	72,893	-----	12,374	991	272,185	6,836	499,214	220,193	311	-----	-----	-----	311	-----	19
7,200	2,960	31,125	209	1,060	1,928	173,077	1,742	268,204	93,385	22	-----	-----	-----	22	-----	20
75,328	53,926	230,708	874	19,805	5,343,754	64,642	64,642	6,521,895	1,113,400	4,312	4,192	120	-----	-----	151	21
20,404	20,380	28,398	-----	2,092	214,220	3,334	3,334	391,848	174,204	286	240	-----	-----	46	-----	22

\* Same number reported for one or other months.

\* The same number reported throughout the year.

TABLE 35.—DETAIL STATEMENT FOR THE STATE, AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

23	MEMPHIS—Continued.	24	251	12	24	40	20	155	My	182	Do	117	122	75	44	2	1	\$1,659,922
24	Patent medicines and compounds, and druggists' preparations.	28	402	10	40	38	10	289	My	311	Oc	263	277	242	35	.....	.....	578,347
25	Printing and publishing, book and job.	19	374	18	15	98	20	217	Do	224	No	207	224	213	9	2	.....	955,084
26	Printing and publishing, newspapers and periodicals.	83	4,050	00	124	302	48	3,456	.....	.....	.....	.....	3,797	3,454	326	5	12	29,190,670
26	All other industries*.....																	

* All other industries embrace—	Brass and bronze products.....	1	Cars, steam-railroad, not including operations of railroad companies...	1	Cooperage.....	1
Agricultural implements.....	Brushes, toilet.....	1	Chemicals.....	3	Electrical machinery, apparatus, and supplies.....	1
Artificial stone products.....	Cars and general shop construction and repairs by electric-railroad companies.....	1	Cleaning and polishing operations...	1	Fertilizers.....	1
Awnings, tents, and sails.....	Cars and general shop construction and repairs by steam-railroad companies.....	2	Clothing, men's.....	2	Flavoring extracts.....	5
Bags, other than paper.....			Coffee, roasting and grinding.....	2	Furniture.....	5
Belting, leather.....			Coffins, burial cases, and undertakers' goods.....	1	Gas, illuminating and heating.....	3
Boxes and cartons, paper.....						

1	NASHVILLE—All industries.....	354	10,747	209	460	1,152	204	8,573	Jo	0,114	No	7,881	8,827	7,020	1,708	54	45	\$28,966,300
2	Bread and other bakery products...	18	107	43	0	2	7	109	Do	112	Jo	108	111	100	3	1	1	211,494
3	Brick.....	9	442	1	10	10	4	411	Jo	485	Ja	309	405	405	.....	.....	.....	479,265
4	Brooms.....	7	20	8	.....	.....	.....	21	Ap	27	Jo	18	23	23	.....	.....	.....	21,940
5	Carriages and wagons and materials.	13	198	15	7	3	1	172	Jo	203	Do	113	176	173	3	.....	.....	276,017
6	Clothing, men's, including shirts....	6	423	.....	13	41	.....	399	Fe	435	Jy	150	304	23	341	.....	.....	343,817
7	Coffee, roasting and grinding.....	3	84	2	5	24	4	49	Do	65	Jy	30	65	24	41	.....	.....	288,396
8	Confectionery and ice cream.....	21	243	18	17	21	13	174	.....	.....	.....	.....	209	124	85	.....	.....	295,173
9	Confectionery and chewing gum.	11	190	10	11	10	10	143	Do	190	Fe	110	168	87	79	.....	.....	234,205
10	Ice cream.....	10	53	8	0	5	3	31	Au	40	Ja	20	43	37	0	.....	.....	60,968
11	Copper, tin, and sheet-iron products.	12	102	14	2	3	2	81	Jy	114	Fe	60	70	70	.....	.....	.....	72,883
12	Flour-mill and gristmill products...	7	307	10	11	39	10	237	Au	207	My	172	214	209	5	.....	.....	1,232,472
13	Food preparations, not elsewhere specified.	12	251	9	10	70	5	148	So	244	My	120	131	119	12	.....	.....	854,610
14	Foundry and machine-shop products.	19	338	16	23	36	0	257	Oc	275	My	243	249	249	.....	.....	.....	741,163
15	Furniture.....	8	331	6	15	19	1	290	Mh	320	Do	239	240	237	3	.....	.....	570,751
16	Leather goods, not elsewhere specified.	13	257	10	22	29	8	188	Mh	243	No	115	212	203	9	.....	.....	644,990
17	Lumber and timber products.....	23	899	21	37	47	8	786	Jo	928	Do	592	880	875	.....	5	.....	2,326,282
18	Marble and stone work.....	6	60	2	5	5	.....	48	Jo	55	Ja	41	48	48	.....	.....	.....	97,817
19	Mattresses and spring beds.....	4	80	.....	7	4	3	66	Fe	71	Do	39	67	49	15	3	.....	144,100
20	Patent medicines and compounds and druggists' preparations.	12	140	3	14	47	11	65	Do	67	Ja	63	66	24	42	.....	.....	152,055
21	Printing and publishing, book and job.	33	716	27	40	80	26	543	Mh	555	Jo	580	545	387	156	2	.....	1,001,901
22	Printing and publishing, newspapers and periodicals.	43	846	16	40	226	78	477	.....	.....	.....	.....	487	371	115	1	.....	2,694,864
23	Printing and publishing.....	4	258	.....	8	04	11	175	Do	180	Jy	174	180	136	44	.....	.....	610,501
24	Printing, publishing, and job printing.	7	440	0	14	100	23	207	Do	301	Au	291	302	230	71	1	.....	1,686,612
25	Publishing without printing....	32	148	10	27	62	44	5	.....	.....	.....	.....	5	5	.....	.....	.....	301,751
26	Tobacco manufactures.....	12	727	0	18	76	10	611	Fe	713	Au	369	590	310	279	1	.....	3,511,001
27	All other industries*.....	70	4,107	42	133	370	91	3,471	.....	.....	.....	.....	3,075	2,901	599	41	44	12,995,300

*All other industries embrace—	Boxes and cartons, paper.....	2	Coffins, burial cases, and undertakers' goods.....	1	Gas, illuminating and heating.....	2
Artificial limbs.....	Buttons.....	1	Cooperage.....	3	Hair work.....	1
Automobiles.....	Cars and general shop construction and repairs by electric-railroad companies.....	1	Corsets.....	1	Hand stamps.....	2
Awnings, tents, and sails.....	Cars and general shop construction and repairs by steam-railroad companies.....	2	Cotton goods.....	1	Hosiery and knit goods.....	1
Bags, other than paper.....			Dairymen's supplies.....	1	House-furnishing goods, not elsewhere specified.....	2
Baking powders.....			Engraving, steel and copper plate, including plate printing.....	1	Ice, manufactured.....	4
Belting, leather.....			Flavoring extracts.....	2	Jewelry.....	1
Bookbinding and blank-book making					Liquors, malt.....	2
Boots and shoes.....						

1	CHATTANOOGA—All industries.	276	8,560	212	364	921	190	7,182	Jo	7,050	Do	6,097	7,212	6,409	746	34	23	\$20,715,601
2	Bread and other bakery products..	16	302	12	11	15	10	254	Au	285	Ja	216	236	151	84	1	.....	234,339
3	Carriages and wagons.....	6	51	14	.....	.....	1	36	Au	37	No	35	36	36	.....	.....	.....	91,900
4	Food preparations, not elsewhere specified.	4	11	4	.....	.....	.....	7	.....	.....	.....	.....	7	7	.....	.....	.....	4,594
5	Foundry and machine-shop products.	43	2,535	19	111	151	52	2,202	So	2,310	No	2,023	2,224	2,176	34	14	.....	5,142,486
6	Furniture and refrigerators.....	6	536	2	21	86	4	473	Mh	640	Do	250	423	423	.....	.....	.....	1,226,385

\* Owned power only.

\* Includes rented power other than electric.

# MANUFACTURES—TENNESSEE.

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OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>	

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

\$43,108	\$36,820	\$62,047	.....	\$9,801	\$17,046	\$757,815	\$2,087	\$1,662,707	\$902,805	293	.....	.....	.....	203	.....	23
68,227	57,135	225,622	\$17,404	31,674	2,508	215,690	8,377	764,037	539,970	304	25	.....	.....	279	69	24
45,171	127,817	240,069	6,582	11,373	12,537	365,285	12,586	1,312,092	931,821	389	.....	.....	.....	389	.....	25
208,625	520,539	2,089,207	3,636	38,756	917,667	6,339,686	262,201	13,297,348	6,695,461	5,575	3,585	103	.....	1,887	711	26

Glass, cutting, staining, and ornamenting.....	1	Liquors, malt.....	1	Shipbuilding, wooden, including boat building.....	2	Tobacco, cigars and cigarettes.....	7
Grease and tallow, not including lubricating greases.....	1	Mirrors, framed and unframed.....	1	Shirts.....	2	Toys and games.....	1
Hair work.....	1	Photo-engraving.....	2	Stencils and brands.....	1	Umbrellas and canes.....	1
Ink, printing.....	1	Pickles, preserves, and sauces.....	1	Stereotyping and electrotyping.....	1	Vinegar and cider.....	4
Iron and steel, doors and shutters.....	1	Refrigerators.....	1	Tobacco, chewing and smoking, and snuff.....	3	Wirework.....	2
Jewelry.....	4	Saws.....	1				
		Scales and balances.....	1				

\$987,626	\$1,381,343	\$4,321,314	\$246,348	\$184,790	\$823,965	\$18,838,733	\$522,662	\$33,276,239	\$13,914,844	21,930	13,020	26	.....	8,884	439	1
19,420	5,760	55,228	.....	4,630	2,709	569,570	9,103	743,917	165,244	105	.....	.....	.....	105	.....	2
22,283	9,202	188,870	.....	300	2,870	29,993	48,471	360,803	282,339	465	270	.....	.....	195	.....	3
.....	.....	14,433	.....	828	.....	19,531	342	33,187	13,314	11	.....	.....	.....	11	.....	4
10,000	2,740	98,234	1,500	8,328	2,149	235,080	2,982	431,225	195,153	187	80	6	.....	101	.....	5
29,658	49,085	129,080	.....	7,805	2,119	384,375	2,885	757,911	370,651	123	.....	.....	.....	123	.....	6
28,050	49,506	19,300	.....	7,688	2,445	682,278	3,465	940,803	264,060	207	.....	.....	.....	207	.....	7
24,768	33,820	68,969	120	11,622	3,848	410,930	6,400	714,673	297,343	277	26	2	.....	249	.....	8
18,825	28,214	53,650	.....	7,210	2,824	274,841	3,338	454,646	176,366	94	15	.....	.....	79	.....	9
6,943	6,612	15,119	120	4,412	1,024	136,089	3,062	260,128	120,977	183	11	2	.....	170	.....	10
2,424	2,648	43,486	.....	4,986	261	52,740	593	130,218	76,885	19	.....	.....	.....	19	.....	11
21,738	53,861	90,804	.....	1,750	7,643	4,176,610	25,098	5,042,320	840,612	3,150	2,520	.....	.....	630	.....	12
40,818	67,301	56,872	37,942	6,731	6,379	2,662,325	17,956	3,584,657	904,376	440	300	.....	.....	140	95	13
42,424	38,332	166,051	1,604	8,406	4,913	333,788	14,881	757,390	408,721	469	90	12	.....	367	9	14
21,002	20,198	154,514	0,363	4,635	4,610	253,808	6,942	570,860	319,119	803	70	.....	.....	733	.....	15
25,000	31,997	91,955	.....	8,270	2,300	418,987	3,702	657,693	234,694	161	.....	.....	.....	161	.....	16
64,300	49,150	325,699	.....	11,467	21,600	1,249,251	14,863	2,097,212	833,098	4,550	3,970	.....	.....	580	47	17
11,980	3,000	17,526	.....	120	600	50,302	3,354	113,531	50,302	275	80	.....	.....	195	.....	18
11,340	4,860	27,114	.....	1,218	957	93,003	2,007	195,141	94,471	109	.....	.....	.....	109	.....	19
18,605	45,697	31,147	.....	4,747	857	172,492	746	341,100	167,871	18	.....	.....	.....	18	.....	20
115,731	85,165	370,835	15,700	29,934	7,685	460,607	13,612	1,467,551	984,332	524	.....	1	.....	523	.....	21
111,120	325,692	283,244	132,255	15,674	10,097	484,666	17,010	1,983,162	1,481,486	461	165	.....	.....	296	.....	22
37,400	73,598	97,447	.....	2,700	2,910	168,816	6,598	529,285	353,871	198	163	.....	.....	35	.....	23
28,960	177,838	182,281	1,200	8,612	6,527	265,110	9,885	1,013,134	738,139	262	2	.....	.....	260	.....	24
44,670	74,256	3,516	131,055	4,462	660	59,740	527	440,743	389,476	1	.....	.....	.....	1	.....	25
58,488	119,281	218,837	.....	3,593	562,116	885,956	12,898	2,747,307	1,848,455	835	748	.....	.....	87	132	26
301,487	384,142	1,861,686	50,774	42,674	177,738	5,190,208	315,344	9,587,570	4,082,018	8,741	4,701	5	.....	4,035	156	27

Lithographing.....	1	Paints.....	2	Statuary and art goods.....	1	Wood, turned and carved.....	2
Lubricating greases.....	1	Photo-engraving.....	1	Stencils and brands.....	1	Woolen goods.....	1
Millinery and lace goods.....	3	Printing materials.....	1	Stereotyping and electrotyping.....	1		
Mineral and soda waters.....	2	Showcases.....	1	Stoves and hot-air furnaces and ranges.....	3		
Mirrors, framed and unframed.....	1	Signs and advertising novelties.....	2	Surgical appliances.....	1		
Models and patterns, not including paper patterns.....	2	Slaughtering and meat packing.....	3	Suspenders, garters, and elastic woven goods.....	1		
Oil, cottonseed, and cake.....	1	Soap.....	1	Toys and games.....	1		
Optical goods.....	1	Stationery goods, not elsewhere specified.....	2	Wirework.....	1		

\$806,758	\$845,875	\$3,836,214	\$47,162	\$137,558	\$231,197	\$10,310,136	\$443,059	\$20,368,555	\$9,015,360	21,227	13,306	.....	.....	7,921	3,126	1
18,421	30,194	112,235	.....	13,924	1,019	535,374	8,256	864,193	320,563	210	.....	.....	.....	210	.....	2
.....	660	25,084	.....	3,584	620	15,916	1,408	58,913	41,589	61	.....	.....	.....	61	.....	3
.....	.....	1,044	.....	780	46	19,149	259	26,859	7,451	3	.....	.....	.....	3	.....	4
257,100	238,771	1,241,571	11,534	23,971	39,574	2,397,269	146,139	5,031,007	2,488,199	6,562	3,570	.....	.....	2,992	1,792	5
53,490	43,844	243,687	.....	5,432	9,231	466,193	11,904	1,087,315	609,218	1,383	1,050	.....	.....	333	549	6

\* Same number reported for one or more other months.

\* Same number reported throughout the year.

## MANUFACTURES—TENNESSEE.

TABLE 35.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

## CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

CHATTANOOGA—Continued.																
7	Ice, manufactured.....	5	129	3	7	13	3	103	Jy	165	Ja	60	101	100	1	\$927,541
8	Leather goods.....	5	11	2	1	1		7		57		57	7	7		10,931
9	Lumber and timber products.....	10	563	2	27	18	3	513	Fe	568	No	432	520	517	3	987,466
10	Marble and stone work.....	5	37	5		0		20	De	30	Mh	23	27	27		40,111
11	Patent medicines and compounds and druggists' preparations.....	15	220	5	19	74	11	111	Ap	132	No	87	117	44	73	588,203
12	Printing and publishing, book and job.....	27	177	27	10	10	8	122	No	135	Au	113	132	106	26	161,530
13	Printing and publishing, news- papers and periodicals.....	13	253	17	11	31	23	171	Au	177	De	169	169	151	18	252,130
14	Stoves and ranges.....	3	208		9	17	4	178	My	221	De	120	173	173		434,064
15	All other industries*.....	116	3,536	100	137	210	71	2,979					3,040	2,491	510	10,613,831

*All other industries embrace—																	
	1	Mass products.....	1						2	Clothing, men's.....	2					Electrical machinery, apparatus, and supplies.....	1
	1	Brook.....	4						2	Coffee, roasting and grinding.....	2					Electroplating.....	1
Agricultural implements.....	2	Brooms.....	3						3	Coffins, burial cases, and undertakers' goods.....	1					Engraving, steel and copper plate, including plate printing.....	1
Artificial stone products.....	1	Carpets, rag.....	1						1	Confectionery and ice cream.....	5					Flour-mill and gristmill products.....	5
Automobile bodies and parts.....	1	Cars and general shop construction and repairs by electric-railroad companies.....	1						7	Cooperage.....	7					Furnishing goods, men's.....	1
Awnings, tents, and sails.....	2	panies.....	1						1	Copper, tin, and sheet-iron work.....	5					Gas fixtures.....	2
Babbitt metal.....	1	Cars and general shop construction and repairs by steam-railroad companies.....	1						1	Cordials and flavoring sirups.....	2					Gas, illuminating and heating.....	1
Baking powders.....	1	panies.....	1						1	Dyeing and finishing textiles.....	1					Hand stamps.....	1
Bookbinding and blank-book making.....	2									Dyestuffs and extracts.....	1						
Boxes and cartons, paper.....	2																

## CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

1	JACKSON.....	40	1,767	28	78	134	18	1,509	Ja	1,695	De	1,147	1,551	1,474	48	29	\$3,096,454
2	JOHNSON CITY.....	30	684	16	28	23	8	611	Jy	676	My	528	690	628	15	17	1,730,278
3	KNOXVILLE.....	142	3,032	120	172	250	61	2,420	Jy	2,630	De	2,150	2,471	1,810	612	16	4,772,888

1 Owned power only.

2 Includes rented power other than electric.

3 Same number reported throughout the year.



OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>	Electric (rented).	

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

\$12,253	\$13,233	\$60,148	.....	\$2,345	\$7,324	\$37,020	\$30,107	\$224,878	\$157,751	1,828	1,750	.....	.....	78	113	7
1,000	400	5,071	.....	1,860	71	4,768	241	13,750	8,751	9	.....	.....	.....	9	.....	8
65,315	23,605	236,915	.....	4,439	8,930	906,654	3,264	1,455,883	545,965	1,684	1,677	.....	.....	7	.....	9
.....	3,314	13,004	\$2,417	1,286	427	17,428	554	48,342	30,860	80	.....	.....	.....	80	.....	10
38,712	118,798	33,693	703	8,269	3,820	213,718	1,028	623,865	408,219	100	40	.....	.....	60	.....	11
20,580	14,906	106,269	4,170	13,200	1,898	118,926	4,059	327,291	204,306	132	.....	.....	.....	132	.....	12
17,440	27,313	110,103	24,499	19,660	4,290	110,399	5,636	500,847	384,812	262	.....	.....	.....	262	.....	13
15,613	14,966	99,081	329	2,105	3,037	80,587	6,603	308,014	220,824	216	40	.....	.....	176	.....	14
306,828	315,811	1,452,249	3,450	36,763	150,904	5,386,745	222,701	9,796,298	4,186,852	8,697	5,179	.....	.....	3,518	672	15

Hosiery and knit goods.....	2	Optical goods.....	2	Saws.....	3	Surgical appliances.....	1
Leather, tanned, curried, and finished	1	Paints.....	1	Shipbuilding, wooden, including boat	1	Suspenders, garters, and elastic woven	1
Liquors, malt.....	1	Photo-engraving.....	1	building.....	1	goods.....	1
Looking-glass and picture frames.....	2	Printing and publishing, music.....	1	Shirts.....	1	Tobacco, cigars and cigarettes.....	4
Mattresses and spring beds.....	4	Regalia and society badges and em-	1	Signs and advertising novelties.....	3	Tools, not elsewhere specified.....	1
Mineral and soda waters.....	5	blems.....	1	Slaughtering and meat packing.....	1	Typewriter ribbons.....	1
Mirrors, framed and unframed.....	1	Roofing materials.....	1	Soda-water apparatus.....	2	Wheelbarrows.....	1
Models and patterns, not including	2	Sausage, not made in slaughtering and	5	Stamped and enameled ware.....	1	Wool shoddy.....	1
paper patterns.....	1	meat-packing establishments.....	5	Stereotyping and electrotyping.....	1		
Oil, not elsewhere specified.....	1						

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

\$120,312	\$118,945	\$855,700	\$563	\$5,002	\$22,148	\$1,772,712	\$307,193	\$3,417,168	\$1,577,263	3,858	3,406	51	.....	401	137	1
45,832	26,602	271,256	167	3,243	8,599	1,794,981	156,619	2,600,161	648,561	3,211	2,377	18	.....	816	223	2
287,478	278,852	1,063,298	32,184	60,606	44,089	4,261,273	94,357	7,346,107	2,960,477	6,168	4,286	9	135	1,738	101	3

<sup>4</sup> Same number reported for one or more other months.

# TEXAS.

By FRANK ADAMS.

## GENERAL STATISTICS.

**General character of the state.**—Texas was admitted to the Union in 1845. With a gross area of 265,896 square miles, of which 262,398 represent land surface, it ranks first in size among the states. Its inhabitants, in 1900, numbered 3,048,710 and in 1910 3,896,542, and its estimated population in 1914 was 4,257,854. In total population Texas ranked fifth in 1910; and in density of population it ranked thirty-sixth, with 14.8 inhabitants per square mile, the corresponding number in 1900 being 11.6.

The urban population of the state in 1910—that is, the population residing in cities and towns of 2,500 inhabitants or more—was 938,104, or 24.1 per cent of the total, as against 17.1 per cent in 1900. There were in the state in 1914, 24 cities each having an estimated population of more than 10,000. These cities, whose aggregate population formed 18.8 per cent of the estimated total population of Texas in that year, reported 38.7 per cent of the value of the state's manufactured products.

The steam-railway mileage in 1914 was 15,758, the greatest for any state, and the electric-railway mileage in 1912 was 680. Important transportation facilities are also provided by the numerous harbors on the Gulf of Mexico and by the canals and navigable rivers within the state.

Agriculture is the leading industry. In 1909 the total value of all farm crops was \$298,133,466 and the value of domestic animals sold or slaughtered on farms \$93,799,753. Texas is the first state in the production of cotton. In 1909 it produced 25.3 per cent of the total for the United States; and the value of this crop, including seed, was \$188,673,954. The state's pro-

duction of cotton in 1914 was 4,592,112 equivalent 500-pound bales, or about one-fourth of the total yield in the United States.

The aggregate value of the mineral products of Texas in 1914, according to the annual report of the United States Geological Survey, was \$30,363,426, of which nearly half—\$14,942,848—represented the value of 20,068,184 barrels of petroleum. In the production of this commodity the state ranked fourth with respect to quantity and sixth with respect to value.

The value of merchandise exported from the various Texas ports during the fiscal year ended June 30, 1914, was \$289,156,195, and the value of merchandise imported through the same ports in that year was \$31,070,840.

**Importance and growth of manufactures.**—In 1914, measured by the value of the products of its manufacturing industries, \$361,279,303, Texas ranked fifteenth among the states and, with an average of 74,853 wage earners employed in such industries, it ranked twenty-third in this respect. In 1899 the state ranked twenty-fifth in value of products and twenty-seventh in average number of wage earners. The proportion which the manufactures of the state represented of the total value of products of manufacturing industries in the United States advanced from eight-tenths of 1 per cent in 1899 to 1.5 per cent in 1914.

Table 1 summarizes the more important data relative to all classes of manufactures combined in the state of Texas for the censuses of 1914, 1909, 1904, and 1899, together with the percentages of increase from census to census.

	MANUFACTURING INDUSTRIES.				PER CENT OF INCREASE. <sup>1</sup>		
	1914	1909	1904	1899	1909-1914	1904-1909	1899-1904
Number of establishments.....	5,084	4,588	3,158	3,107	10.8	45.3	1.6
Persons engaged.....	91,114	84,675	57,892	( <sup>2</sup> )	7.7	46.1	.....
Proprietors and firm members.....	4,787	4,496	3,073	( <sup>2</sup> )	6.5	46.3	.....
Salaried employees.....	11,474	9,849	5,753	2,861	16.5	71.2	101.1
Wage earners (average number).....	74,853	70,230	49,066	38,004	6.6	43.1	27.1
Primary horsepower.....	335,791	282,471	164,637	116,157	18.9	71.6	41.7
Capital.....	\$283,543,820	\$216,875,679	\$115,661,871	\$63,655,616	30.7	87.5	81.7
Salaries and wages.....	59,179,344	48,774,827	30,580,651	19,830,357	21.3	59.5	54.2
Salaries.....	14,357,967	10,867,555	6,117,709	2,918,676	32.1	77.6	109.6
Wages.....	44,821,377	37,907,272	24,462,942	16,911,681	18.2	54.9	44.7
Paid for contract work.....	1,342,170	1,324,435	1,456,004	( <sup>2</sup> )	1.3	—9.0	.....
Rent and taxes (including internal revenue).....	3,930,184	2,618,836	1,064,701	( <sup>2</sup> )	50.4	.....	.....
Cost of materials.....	253,144,261	178,178,515	91,603,630	54,388,303	42.1	94.5	68.4
Value of products.....	361,279,303	272,895,635	150,528,389	92,894,433	32.4	81.8	62.0
Value added by manufacture (value of products less cost of materials).....	108,135,042	94,717,120	58,924,759	38,506,130	14.2	60.7	53.0

<sup>1</sup> A minus sign (—) denotes decrease.

<sup>2</sup> Figures not available.

<sup>3</sup> Excluding internal revenue.

This table brings out the fact that the manufacturing industries of Texas in most respects show a lower rate of increase during the five-year period 1909-1914

than during the preceding periods 1904-1909 and 1899-1904. For the three census periods, however, a satisfactory percentage of increase is shown for each

## MANUFACTURES—TEXAS.

item except contract work. As amount paid for contract work depends upon the methods of operation and not upon the magnitude of the transactions, the decrease has no significance.

During the decade 1904 to 1914 the value of manufactures in Texas increased at a much greater rate than for the United States as a whole. For this period the increase in the number of establishments was 61 per cent; in average number of wage earners employed, 52.6 per cent; in value of products, 140

per cent; and in value added by manufacture, 83.5 per cent. For the five-year period from 1909 to 1914 the corresponding percentages were 10.8 per cent, 6.6 per cent, 32.4 per cent, and 14.2 per cent, respectively.

Table 2 shows the relative importance of the leading manufacturing industries in 1914 and gives percentages of increase for the three five-year periods from 1899 to 1914.

INDUSTRY.	CENSUS OF 1914.							PER CENT OF INCREASE. <sup>1</sup>								
	Number of establishments.	Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.		
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904
All industries.....	5,084	74,853	100.0	\$361,270,303	100.0	\$108,135,042	100.0	6.6	43.1	27.1	32.4	81.3	62.0	14.2	60.7	53.0
Slaughtering and meat packing.....	21	3,401	4.7	52,990,000	14.7	8,532,880	7.9	-4.1	80.2	387.7	24.0	172.3	300.1	60.7	152.5	176.7
Oil, cottonseed, and cake.....	233	4,471	6.0	41,914,959	11.6	6,769,113	6.3	45.5	12.2	10.5	40.2	60.0	83.5	-10.9	123.8	-20.3
Flour-mill and gristmill products.....	101	1,300	1.7	35,110,301	9.7	6,537,114	5.1	6.9	23.3	44.6	8.1	47.1	84.8	41.6	22.7	68.2
Lumber and timber products.....	587	10,950	26.7	28,740,614	8.0	17,100,884	15.8	-15.1	60.8	17.4	-10.7	70.0	6.2	-10.3	52.2	48.9
Cars and general shop construction and repairs by steam-railroad companies.....	93	10,015	14.6	15,270,387	4.2	9,207,950	8.6	11.0	13.8	29.5	14.3	27.0	26.0	10.0	30.3	35.2
Printing and publishing.....	1,188	4,000	5.3	15,051,260	4.2	11,054,001	10.2	6.4	28.0	34.5	29.9	48.0	70.0	25.9	44.7	67.1
Foundry and machine-shop products.....	177	3,036	4.0	8,782,481	2.4	4,701,307	4.4	3.8	40.6	45.2	8.8	55.8	83.8	13.1	46.3	82.1
Liquors, malt.....	13	958	1.3	8,470,630	2.3	5,541,942	5.1	25.2	22.2	7.0	31.0	55.6	54.4	40.2	55.9	40.7
Bread and other bakery products.....	530	1,940	2.6	7,503,208	2.1	3,301,401	3.1	40.1	63.5	86.2	41.3	74.2	134.0	40.4	73.4	109.9
Rice, cleaning and polishing.....	10	345	0.5	7,210,359	2.0	850,172	0.8	-10.8	-0.5	.....	-11.4	75.5	.....	-16.7	-9.9	.....
Ice, manufactured.....	255	1,923	2.6	5,328,302	1.5	3,608,772	3.4	34.0	65.4	40.0	38.0	84.5	76.0	33.3	82.1	74.9
Food preparations.....	26	317	0.4	4,051,956	1.1	720,425	0.7	11.6	85.0	.....	-22.5	1,294.4	621.2	10.9	201.0	690.5
Cotton goods.....	12	1,875	2.5	3,754,785	1.0	1,111,507	1.0	17.9	60.1	.....	33.4	77.4	32.2	8.8	79.6	1.8
Leather goods.....	87	940	0.9	3,557,371	1.0	1,085,049	1.0	-11.2	-3.6	-15.0	-17.0	29.2	24.3	-28.0	15.0	26.7
Coffee, roasting and grinding.....	36	145	0.2	3,325,861	0.9	773,103	0.7	7.4	.....	.....	40.4	812.3	.....	50.0	1,057.1	.....
Wood preserving.....	6	350	0.5	3,005,503	0.9	454,311	0.4	-10.1	37.2	.....	-10.8	156.8	.....	-16.4	106.1	.....
Confectionery.....	46	773	1.0	2,505,310	0.7	1,113,204	1.0	7.8	40.6	46.4	4.7	112.2	40.0	12.2	103.7	40.3
Brick, tile, pottery, and other clay products.....	81	1,811	2.4	2,378,410	0.7	1,444,036	1.3	-23.1	54.3	-17.0	-24.3	92.5	34.6	-33.8	82.4	28.2
Cement.....	4	583	0.8	2,331,094	0.6	1,067,210	1.0	01.0	.....	.....	172.6	.....	.....	130.1	.....	.....
Butter.....	51	174	0.2	2,280,770	0.6	528,779	0.5	.....	.....	.....	245.6	947.0	-22.2	306.9	828.6	-53.3
Copper, tin, and sheet-iron work.....	247	728	1.0	2,238,381	0.6	1,221,701	1.1	-0.7	57.6	42.2	1.1	85.3	58.5	7.8	70.8	63.6
Gas, illuminating and heating.....	27	613	0.8	2,185,114	0.6	1,410,657	1.3	0.6	250.6	.....	32.9	128.6	80.2	28.9	110.5	82.5
Clothing, men's.....	18	1,062	1.4	2,080,130	0.6	801,533	0.8	7.1	.....	.....	18.6	.....	.....	6.0	.....	.....
Mineral and soda waters.....	202	545	0.7	1,913,375	0.5	1,010,887	1.0	30.2	24.0	30.0	40.0	30.5	53.8	24.7	25.3	54.8
Marble and stone work.....	135	464	0.6	1,360,901	0.4	843,771	0.8	-23.3	74.9	-4.4	-5.3	85.5	-8.8	-10.3	90.9	-13.4
Furniture and refrigerators.....	30	595	0.8	1,278,028	0.4	701,578	0.7	-15.1	138.4	93.4	-15.5	207.9	165.4	2.0	150.4	160.2
Canning and preserving.....	22	213	0.3	1,210,909	0.3	580,030	0.5	34.8	32.8	.....	143.2	50.0	.....	95.0	130.5	.....
Mattresses and spring beds.....	59	283	0.4	1,059,587	0.3	457,916	0.4	21.5	-25.1	111.6	61.1	-5.0	136.3	54.7	-0.3	123.3
Confectionery (ice cream).....	78	207	0.3	1,020,047	0.3	427,278	0.4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooperage.....	6	218	0.3	709,101	0.2	174,434	0.2	-10.3	3.4	27.7	7.0	-3.0	117.3	-24.7	-6.1	72.0
Patent medicines and compounds and druggists' preparations.....	61	116	0.2	739,801	0.2	452,004	0.4	-20.0	.....	.....	-27.0	.....	.....	-25.0	.....	.....
Cars and general shop construction and repairs by electric-railroad companies.....	10	583	0.8	734,666	0.2	460,760	0.4	153.5	.....	.....	104.4	.....	.....	195.6	.....	.....
Fertilizers.....	8	101	0.1	638,277	0.2	271,828	0.3	.....	.....	.....	1,019.3	.....	.....	3,300.0	.....	.....
Paving materials.....	18	397	0.5	618,216	0.2	319,685	0.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turpentine and rosin.....	6	800	1.1	608,374	0.2	610,098	0.5	200.4	.....	.....	178.9	.....	.....	180.8	.....	.....
Tobacco, cigars, and cigarettes.....	66	344	0.4	601,973	0.2	361,680	0.3	1.5	-2.3	14.5	18.3	-7.5	4.0	10.7	-3.5	5.0
Brass and bronze products.....	7	91	0.1	494,763	0.1	143,637	0.1	-18.8	.....	.....	-4.4	.....	.....	-31.1	.....	.....
Carriages and wagons and materials.....	32	205	0.3	488,741	0.1	332,429	0.1	-50.2	95.3	-27.2	-41.1	125.5	-27.3	-35.0	114.7	-27.0
Wall plaster.....	3	200	0.3	487,617	0.1	317,620	0.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shipbuilding, wooden, including boat building.....	14	168	0.2	473,524	0.1	194,874	0.2	.....	.....	.....	523.7	49.0	-50.5	364.3	20.0	.....
Brooms from broom corn.....	31	177	0.2	450,550	0.1	195,178	0.2	-3.8	33.3	.....	16.8	52.7	.....	6.5	58.6	.....
Vinegar.....	6	28	( <sup>2</sup> )	455,402	0.1	227,150	0.2	.....	.....	.....	360.1	.....	.....	272.1	.....	.....
Awnings, tents, and sails.....	10	108	0.1	428,823	0.1	140,003	0.1	.....	.....	.....	38.4	78.2	.....	53.3	37.3	.....
Salt.....	3	140	0.2	424,869	0.1	198,021	0.2	-13.6	-5.8	-9.9	4.4	16.0	36.6	3.7	22.4	34.5
All other industries.....	287	6,753	9.0	84,722,670	23.5	12,534,066	11.6	.....	.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Percentages are based on figures in Table 32; a minus sign (-) denotes decrease; percentages are omitted where base is less than 100, or where comparable figures can not be given.

<sup>2</sup> Does not include printing and publishing, music (2 establishments), to avoid disclosing operations of individual establishments.

<sup>3</sup> Less than one-tenth of 1 per cent.

Separate statistics are presented in this table for 44 industries, or industry groups, each of which reported products valued at more than \$400,000 in 1914. These industries include 1 with products exceeding \$50,000,000 in value, 5 with products between

\$15,000,000 and \$50,000,000, 5 with products between \$5,000,000 and \$10,000,000, 18 with products between \$1,000,000 and \$5,000,000, and 15 with products valued at less than \$1,000,000 but more than \$400,000. Among those included in the table under

"all other industries" are petroleum refining, smelting and refining copper, sugar refining, the manufacture of bags other than paper, the making of cordials and flavoring sirups, each having products valued at more than \$1,000,000, and the manufacture of felt goods, with a product of more than \$400,000. These 6 industries could not be shown separately without disclosing individual operations.

The industries shown in the table are arranged in the order of their importance by value of products, but the arrangement would vary considerably from that given if based on the average number of wage earners or the value added by manufacture. Petroleum refining, one of the industries statistics for which can not be shown, ranked first in the state in the value of its products, while copper smelting and refining ranked among the first 10 industries. Slaughtering and meat packing, which ranked second in value of products, was fifth in average number of wage earners and fourth in value added by manufacture. Cottonseed oil and cake ranked third in value of products, fourth in average number of wage earners, and fifth in value added by manufacture. Flour-mill and gristmill products, fourth in value of products, held seventh place in value added by manufacture and twelfth in average number of wage earners. Lumber and timber products, fifth in value of products, was first in both average number of wage earners and value added by manufacture. The rank of the slaughtering and meat-packing and flour and grist mill industries in average number of wage earners and value added by manufacture is much lower in proportion to the value of the product than is the case with most other industries.

Compared with the ranking in 1909, there were a number of changes in 1914. Petroleum refining, which ranked fifth as measured by value of products in 1909, advanced to first place in 1914, slaughtering and meat packing dropping to second; oil, cottonseed, and cake, holding fourth place in 1909, held third in 1914; flour-mill and gristmill products and lumber and timber products, ranking second and third, respectively, in 1909, ranked fourth and fifth in 1914; steam-railroad repair shops, the manufacture of foundry products, and of malt liquors are the only industries among the 10 most important that held the same rank in both census years—sixth, ninth, and tenth, respectively.

The greatest relative increases in value of products from 1909 to 1914 were shown for fertilizers, 1,019.3 per cent; shipbuilding, wooden, including boat building, 523.7 per cent; vinegar, 369.1 per cent; and butter 245.6 per cent.

*Petroleum, refining.*—This, the most important industry in Texas in 1914 with respect to value of products, represented more than one-eighth of the total petroleum refined in the United States in that year. The principal products were gasoline; illuminating,

fuel, and lubricating oils; greases; and paraffin wax. The figures, however, can not be shown without disclosing the operations of individual establishments.

*Slaughtering and meat packing.*—This classification includes establishments doing wholesale slaughtering and meat packing and those engaged in the manufacture of sausage exclusively. It does not, however, include the numerous retail establishments where a large number of animals are slaughtered for local trade. At the 1914 census 18 establishments were engaged in slaughtering and meat packing and 3 in the making of sausage. During the five-year period 1909-1914 the total value of products of this industry shows an increase of \$10,460,254, or 24.6 per cent, while the average number of wage earners decreased by 148, or 4.1 per cent.

*Oil, cottonseed, and cake.*—The statistics include those for all establishments engaged primarily in extracting oil from cotton seed or refining crude cottonseed oil. Texas ranked first in the manufacture of cottonseed oil. In 1914 it contributed 19.8 per cent of the total value of cottonseed products reported for the United States, as compared with 20.2 per cent in 1909. From 1909 to 1914 the number of wage earners increased by 45.5 per cent and the value of products by 40.2 per cent.

*Flour-mill and gristmill products.*—This industry does not include custom mills grinding exclusively for toll or local consumption, or factories making fancy cereals or breakfast foods as a chief product. There were increases in number of wage earners and value of products during the five-year period, but a decrease in number of establishments. The value of the products of this industry formed 9.7 per cent of the total for all manufactures of the state, a slightly smaller proportion than in 1909, when it was 11.9 per cent.

*Lumber and timber products.*—This industry embraces not only logging operations, sawmills, and planing mills, but also includes the manufacture of wooden packing boxes and window and door screens and weather strips. As compared with 1909, a decrease of 26.5 per cent in number of establishments is shown in 1914, 15.1 per cent in number of wage earners, 10.7 per cent in value of products, and 19.3 per cent in value added by manufacture. These decreases are due to a depression in the industry and also, to some extent, to the fact that some of the smaller mills reported as engaged in merchant sawing in 1909 were doing only custom work in 1914 and, therefore, were not enumerated.

*Cars and general shop construction and repairs by steam-railroad companies.*—This industry represents the work done in the car shops of steam-railroad companies and is largely confined to repairs to rolling stock and equipment. It does not include minor repairs made in roundhouses. The value of the product is the value of the work performed, and this increased from \$13,358,948 in 1909 to \$15,276,387 in 1914, or 14.4 per

cent. The average number of wage earners employed increased by 11.6 per cent for the five year period 1909 to 1914.

*Printing and publishing.*—All establishments primarily engaged in printing and publishing newspapers, periodicals, and books, job printing, bookbinding and blank-book making, lithographing, and engraving are included under this head. Two establishments engaged in printing and publishing music are excluded in order to avoid disclosure of individual operations. There were 1,188 establishments reported for the industry in 1914, an increase of 11.3 per cent over 1909, while the value of products increased 29.9 per cent.

*Persons engaged in manufacturing industries.*—Table 3 shows, for 1914 and 1909, the number of persons engaged in manufactures, distributed by sex, the average number of wage earners being distributed also by age. The sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the "Explanation of terms."

In 1914 the total number of persons engaged in manufactures was 91,114, of whom 74,853, or 82.2 per cent, were wage earners; 8,540, or 9.4 per cent, proprietors and officials; and 7,721, or 8.5 per cent, clerks. Of the wage earners 16 years of age and over

94.3 per cent were males and 5.7 per cent were females.

CLASS.	Cen- sus year.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.				
		Total.	Male.	Fe- male.	Per cent of total.	
					Male.	Fe- male.
All classes.....	1914 1909	91,114 84,575	85,700 79,600	5,414 4,870	94.1 94.2	5.0 5.8
Proprietors and officials.....	1914 1909	8,540 7,911	8,359 7,763	181 148	97.9 98.1	2.1 1.9
Proprietors and firm members..	1914 1909	4,787 4,496	4,638 4,373	149 123	96.9 97.3	3.1 2.7
Salaried officers of corporations..	1914 1909	1,124 940	1,109 929	15 11	98.7 98.8	1.3 1.2
Superintendents and managers..	1914 1909	2,629 2,475	2,612 2,461	17 14	99.4 99.4	0.6 0.6
Clerks and other subordinate salaried employees.....	1914 1909	7,721 6,434	6,794 5,808	927 620	88.0 90.3	12.0 9.7
Wage earners (average number)....	1914 1909	74,853 70,230	70,547 66,125	4,306 4,105	94.2 94.2	5.8 5.8
16 years of age and over.....	1914 1909	74,815 68,974	70,076 65,092	4,239 3,882	94.3 94.4	5.7 5.6
Under 16 years of age.....	1914 1909	538 1,256	471 1,033	67 223	87.5 82.2	12.5 17.8

Table 4 gives, for the several classes of persons engaged in manufactures, the percentages of increase from 1909 to 1914 and the per cent distribution at the two censuses.

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.							
	Per cent of increase, <sup>1</sup> 1909-1914.			Per cent distribution.				
	Total.	Male.	Female.	Total.		Male.		Female.
				1914	1909	1914	1909	1914 1909
All classes.....	7.7	7.5	11.0	100.0	100.0	100.0	100.0	100.0
Proprietors and officials.....	8.0	7.7	22.3	9.4	9.4	9.8	9.7	8.0
Proprietors and firm members.....	0.5	0.0	21.1	5.3	5.3	5.4	5.5	2.5
Salaried officers of corporations.....	10.6	19.4	(3)	1.2	1.1	1.3	1.2	0.3
Superintendents and managers.....	6.2	6.1	(3)	2.9	2.9	3.0	3.1	0.3
Clerks and other subordinate salaried employees.....	20.0	17.0	48.1	8.5	7.6	7.9	7.3	12.8
Wage earners (average number).....	6.6	6.7	4.9	82.2	83.0	82.3	83.0	79.5
16 years of age and over.....	7.7	7.6	9.2	81.6	81.5	81.8	81.7	79.6
Under 16 years of age.....	-57.2	-54.4	-70.0	0.0	1.5	0.5	1.3	4.6

<sup>1</sup> A minus sign (—) denotes decrease.

<sup>2</sup> Percentages are omitted where base is less than 100.

This table shows increases for the five-year period in the number of employees in each of the classes except wage earners under 16 years of age; this class, however, was small, 538, or six-tenths of 1 per cent of the total number of persons engaged in 1914, and 1,256, or 1.5 per cent, in 1909. Wage earners over 16 years of age formed by far the largest class, 81.6 per cent of the total persons engaged in manufacturing industries in 1914 and 81.5 per cent in 1909.

In order to compare the distribution of persons engaged in manufactures in 1914 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See "Explanation of terms".) Table 5 makes this comparison according to occupational status.

The number of employees in each class shows an increase at each successive census, the larger per-

centages of increase being shown for the five-year period 1904-1909. A slight increase is shown in the proportion of salaried employees in 1914 as compared with 1909, and a slight decrease in the number of proprietors, probably accounted for by changes in organization.

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.							
	Number.			Per cent distribution.			Per cent of increase.	
	1914	1909	1904	1914	1909	1904	1909-1914	1904-1909
Total.....	91,114	84,575	57,892	100.0	100.0	100.0	7.7	46.1
Proprietors and firm members.....	4,787	4,496	3,073	5.3	5.3	5.3	6.5	46.3
Salaried employees.....	11,474	9,849	5,753	12.6	11.6	9.9	16.5	71.2
Wage earners (average).....	74,853	70,230	49,066	82.2	83.0	84.8	6.6	43.1

The average number of wage earners employed, and their per cent distribution as males 16 years of age and over, females 16 years of age and over, and children under 16 years of age, are given in Table 6 for 1914, 1909, and 1904. The table also shows for some of the important industries a similar distribution of wage earners for 1914 and 1909.

INDUSTRY.	Census year.	WAGE EARNERS.			
		Average number. <sup>1</sup>	Per cent of total.		
			16 years of age and over.		Under 16 years of age.
			Male.	Female.	
All industries.....	1914	74,853	93.6	5.7	0.7
	1909	70,230	92.7	5.5	1.8
	1904	49,068	93.3	5.1	1.7
Bread and other bakery products.....	1914	1,040	80.7	17.0	2.3
	1909	1,391	71.2	25.7	3.0
Brick, tile, pottery, and other clay products.	1914	1,811	98.8	.....	1.2
	1909	2,355	98.0	.....	2.0
Cars and general shop construction and repairs by electric-railroad companies.	1914	583	100.0	.....	.....
	1909	230	100.0	.....	.....
Cars and general shop construction and repairs by steam-railroad companies.	1914	10,015	100.0	(2)	(2)
	1909	9,782	99.9	(2)	(2)
Cement.....	1914	583	100.0	.....	.....
	1909	302	100.0	.....	.....
Clothing, men's.....	1914	1,062	7.0	93.0	.....
	1909	992	8.1	88.7	3.2
Confectionery.....	1914	773	54.1	45.4	0.5
	1909	717	51.2	44.3	4.5
Copper, tin, and sheet-iron work.....	1914	728	98.4	.....	1.6
	1909	733	97.5	.....	2.5
Cotton goods.....	1914	1,875	64.3	32.4	3.3
	1909	1,590	53.1	32.7	14.2
Flour-mill and gristmill products.....	1914	1,300	99.9	0.1	.....
	1909	1,216	99.3	0.2	0.4
Foundry and machine-shop products.....	1914	3,030	99.3	0.3	0.4
	1909	2,925	99.2	0.1	0.8
Furniture and refrigerators.....	1914	595	97.3	2.4	0.3
	1909	701	95.5	2.2	2.3
Gas, illuminating and heating.....	1914	613	99.7	0.2	0.2
	1909	575	100.0	.....	.....
Ice, manufactured.....	1914	1,026	98.3	.....	1.7
	1909	1,437	99.4	0.1	0.5
Leather goods.....	1914	640	97.3	2.3	0.3
	1909	721	97.1	1.7	1.2
Liquors, malt.....	1914	958	100.0	.....	.....
	1909	765	99.9	0.1	.....
Lumber and timber products.....	1914	19,956	99.5	0.3	0.2
	1909	23,518	98.5	0.2	1.3
Mineral and soda waters.....	1914	545	93.0	1.3	5.7
	1909	400	95.0	1.1	4.0
Oil, cottonseed, and cake.....	1914	4,471	99.8	0.2	.....
	1909	3,073	99.9	0.1	.....
Printing and publishing.....	1914	4,690	84.8	11.6	3.6
	1909	4,408	80.3	13.9	5.8
Slaughtering and meat packing.....	1914	3,491	91.8	7.9	0.3
	1909	3,639	91.7	6.4	1.9
Turpentine and rosin.....	1914	809	98.8	.....	3.2
	1909	219	100.0	.....	.....
All other industries.....	1914	11,544	90.6	8.8	0.5
	1909	8,481	87.9	10.3	1.8

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number for all industries combined, see "Explanation of terms."

<sup>2</sup> Less than one-tenth of 1 per cent.

For all industries combined, the proportions which male and female wage earners 16 years of age and over represented of the total show a slight increase

during the decade 1904-1914, while that for children under 16 years of age decreased from 1.7 per cent in 1904 to seven-tenths of 1 per cent in 1914.

Of the 22 industries for which separate figures are given in this table, 14 show increases from 1909 to 1914 in the proportion of males and 10 show increases in the proportion of females, while in only 4—gas illuminating and heating; ice, manufactured; mineral and soda waters; and turpentine and rosin—were there increases in the proportions of children under 16 years of age. In one industry—men's clothing—women constituted 93 per cent of the total number of wage earners; in the manufacture of confectionery and cotton goods the female wage earners over 16 years of age were 45.4 per cent and 32.4 per cent, respectively, of the total for the industry. In both of these industries the percentage of women was larger than in 1909, while the proportion of children employed showed a decided decrease. The largest number of children under 16 years of age employed in any industry in 1914 was 171, reported for printing and publishing, but this number was less, both actually and proportionately, than in 1909.

Table 7 shows the average number and the per cent distribution of wage earners employed in each of the 24 cities having more than 10,000 inhabitants, classified according to age periods, and in the case of those 16 years of age and over, according to sex, for 1914, 1909, and 1904.

Table 8 gives percentages of increase from census to census, based on the figures in Table 7, for cities where per cent of increase can be computed.

Of the cities shown in the table, two gave employment to more than 5,000 wage earners, one to more than 4,000, and six other cities to more than 1,000 wage earners each. In every city the proportion of male wage earners 16 years of age and over was greatly in excess of that of females; in fact, there was none having the proportion of males as low as 80 per cent in 1914. Only five cities for which comparative figures are given show a larger proportion of female wage earners over 16 years of age in 1914 than in 1909, but with one exception the number of these wage earners was small. Dallas employed the largest number of females and they formed 18.6 per cent of the total number for the city. The women in this city were for the most part employed in the manufacture of men's clothing, bakery products, bags other than paper, and confectionery. Fort Worth ranks third in the number of female wage earners employed, and they formed 15.1 per cent of the wage earners of the city, and were employed largely in the clothing and confectionery industries.

A majority of the cities show decreases from 1909 to 1914 in both numbers and proportions of wage earners under 16 years of age, the exceptions being Denison, Palestine, Sherman, and Tyler. Four cities reported no wage earners under 16 years of age in 1914.

Table 7

## AVERAGE NUMBER OF WAGE EARNERS IN MANUFACTURING INDUSTRIES.

CITY.	Total.			16 years of age and over.						Under 16 years of age.			Per cent of total.								
				Male.			Female.						16 years of age and over.						Under 16 years of age.		
													Male.			Female.					
	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904			
Ableno.....	107	.....	.....	04	.....	.....	13	.....	.....	.....	.....	.....	87.9	.....	.....	12.1	.....	.....	.....	.....	.....
Amarillo.....	311	.....	.....	297	.....	.....	14	.....	.....	.....	.....	.....	95.5	.....	.....	4.5	.....	.....	.....	.....	.....
Austin.....	891	754	641	830	693	515	57	66	120	4	5	6	93.2	90.6	80.3	0.4	8.8	18.7	0.4	0.7	0.9
Beaumont.....	1,073	893	.....	1,053	832	.....	12	20	.....	8	11	.....	98.1	96.4	.....	1.1	2.3	.....	0.7	1.3	.....
Brownsville.....	76	51	.....	71	47	.....	1	4	.....	4	.....	.....	93.4	92.2	.....	1.3	7.8	.....	5.3	.....	.....
Cleburne.....	886	825	.....	855	820	.....	30	1	.....	1	4	.....	96.5	99.4	.....	3.4	0.1	.....	0.1	0.5	.....
Dallas.....	5,284	4,882	3,445	4,251	3,889	2,710	981	870	588	52	123	147	80.5	79.7	78.7	18.6	17.8	17.1	1.0	2.5	4.3
Denison.....	954	833	725	908	795	708	36	37	17	10	1	.....	95.2	95.4	97.6	3.8	4.4	2.3	1.0	0.1	.....
El Paso.....	2,347	1,752	1,158	2,255	1,656	960	83	143	200	9	53	8	90.1	88.8	82.0	3.5	8.2	17.3	0.4	3.0	0.7
Fort Worth.....	2,308	2,050	1,423	1,945	1,672	1,200	340	361	100	14	26	18	84.3	81.2	91.3	15.1	17.5	7.4	0.6	1.3	1.3
Galveston.....	1,410	1,094	761	1,264	940	633	133	124	108	13	30	20	89.6	85.9	83.2	9.4	11.3	14.2	0.9	2.7	2.6
Houston.....	5,607	5,338	5,050	5,168	4,820	4,760	418	450	240	21	62	57	92.2	90.4	93.9	7.5	8.4	4.9	0.4	1.2	1.1
Laredo.....	270	213	515	270	202	512	.....	8	3	.....	3	.....	100.0	94.8	99.4	.....	3.8	0.0	.....	1.4	.....
Marshall.....	1,166	977	.....	1,150	958	.....	6	7	.....	1	12	.....	99.4	98.1	.....	0.5	0.7	.....	0.1	1.2	.....
Palestine.....	648	745	.....	635	737	.....	6	7	.....	7	1	.....	98.0	98.0	.....	0.9	0.9	.....	1.1	0.1	.....
Paris.....	513	641	.....	443	478	.....	68	53	.....	2	10	.....	83.4	88.4	.....	13.3	9.8	.....	0.4	1.8	.....
San Angelo.....	191	116	.....	153	112	.....	6	3	.....	2	.....	.....	95.0	97.4	.....	3.7	2.6	.....	1.2	.....	.....
San Antonio.....	4,083	3,105	2,457	3,528	2,602	2,204	541	481	205	14	22	48	80.4	83.3	89.7	13.3	15.5	8.3	0.3	0.7	2.0
Sherman.....	389	273	1,307	327	232	1,270	55	39	25	7	2	6	81.1	85.0	89.9	14.1	14.3	8.1	1.8	0.7	2.0
Temple.....	342	306	.....	318	333	.....	24	26	.....	7	.....	.....	93.0	91.0	.....	7.0	7.1	.....	1.9	.....	.....
Texas.....	955	.....	.....	921	.....	.....	20	.....	.....	14	.....	.....	90.4	.....	.....	2.1	.....	.....	1.5	.....	.....
Tyler.....	500	484	.....	434	442	.....	62	40	.....	10	2	.....	85.8	91.3	.....	12.3	8.3	.....	2.0	0.4	.....
Waco.....	1,125	1,033	947	977	820	711	138	143	206	10	64	30	80.8	80.0	75.1	12.3	13.8	21.8	0.9	6.2	3.2
Wichita Falls.....	377	.....	.....	361	.....	.....	3	.....	.....	13	.....	.....	95.8	.....	.....	0.8	.....	.....	3.4	.....	.....

<sup>1</sup> Figures do not agree with those published because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

The highest percentage of increase during the last five-year period in total number of wage earners, 42.5 per cent, is shown for Sherman; the next highest, 40 per cent, for San Angelo; the third highest, 34 per

cent, for El Paso. The greatest percentage of increase during the decade 1904-1914, 102.7 per cent, is shown for El Paso, and the next highest, 85.3 per cent, for Galveston.

Table 8

PER CENT OF INCREASE IN AVERAGE NUMBER OF WAGE EARNERS.<sup>1</sup>

CITY.	Period.	Total.	16 years of age and over.		Under 16 years of age.	CITY.	Period.	Total.	16 years of age and over.		Under 16 years of age.
			Male.	Female.					Male.	Female.	
Austin.....	1904-1914	39.0	61.2	-52.5	.....	Laredo.....	1904-1914	-47.6	-47.3	.....	.....
	1909-1914	18.2	21.5	-13.0	.....		1909-1914	20.8	33.7	.....	.....
	1904-1909	17.6	32.0	-45.0	.....		1904-1909	-58.6	-60.5	.....	.....
Beaumont.....	1909-1914	24.3	20.6	.....	.....	Marshall.....	1909-1914	19.3	21.0	.....	.....
Cleburne.....	1909-1914	7.4	4.3	.....	.....	Palestine.....	1909-1914	-13.0	-13.8	.....	.....
Dallas.....	1904-1914	53.4	55.9	66.8	-64.6	Paris.....	1909-1914	-5.2	-7.3	.....	.....
	1909-1914	8.2	9.3	12.8	-57.7		1909-1914	.....	.....	.....	.....
	1904-1909	41.7	43.5	48.0	-10.3	San Angelo.....	1909-1914	40.0	36.6	.....	.....
Denison.....	1904-1914	31.6	28.2	111.8	.....	San Antonio.....	1904-1914	66.2	60.1	103.9	.....
	1909-1914	14.5	14.2	-2.7	.....		1909-1914	31.5	35.6	12.5	.....
	1904-1909	14.9	12.3	117.6	.....		1904-1909	26.4	18.1	134.6	.....
El Paso.....	1904-1914	102.7	137.4	-58.5	.....	Sherman.....	1904-1914	26.7	18.5	.....	.....
	1909-1914	34.0	44.9	-42.0	.....		1909-1914	42.5	40.9	.....	.....
	1904-1909	51.3	63.8	-28.5	.....		1904-1909	-11.1	-15.9	.....	.....
Fort Worth.....	1904-1914	62.2	49.7	229.2	.....	Temple.....	1909-1914	-0.6	-4.5	.....	.....
	1909-1914	12.1	16.3	-3.3	.....		1909-1914	.....	.....	.....	.....
	1904-1909	44.7	28.7	240.6	.....	Tyler.....	1909-1914	4.5	-1.8	.....	.....
Galveston.....	1904-1914	85.3	90.7	23.1	.....	Waco.....	1904-1914	18.8	37.4	-33.0	.....
	1909-1914	28.9	34.5	7.3	.....		1909-1914	8.9	18.3	-3.5	.....
	1904-1909	43.8	48.5	14.8	.....		1904-1909	9.1	16.2	-30.6	.....
Houston.....	1904-1914	10.9	8.8	67.9	.....						
	1909-1914	5.0	7.1	-7.1	.....						
	1904-1909	5.8	1.6	80.7	.....						

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.

Wage earners employed, by months.—The following table gives, for all industries combined, the total number of wage earners employed on the 15th of each month, or the nearest representative day, for 1914 and 1909,

and the average number employed during each month in 1904, together with the percentage which the number reported for each month forms of the greatest number reported for any month.



**Table 9**

WAGE EARNERS IN MANUFACTURING INDUSTRIES.

MONTH.	Number, <sup>1</sup>			Per cent of maximum.		
	1914	1909	1904	1914	1909	1904
January.....	76,993	68,563	49,280	100.0	90.6	62.7
February.....	75,559	66,485	48,023	98.1	87.9	63.3
March.....	74,217	68,082	47,847	96.4	90.0	60.0
April.....	73,261	67,772	46,719	95.2	89.6	57.9
May.....	72,210	66,079	46,818	93.8	87.4	58.1
June.....	73,779	68,037	46,712	94.9	89.9	57.6
July.....	75,779	69,153	47,209	98.4	91.4	58.8
August.....	76,587	69,102	47,982	99.5	91.5	60.2
September.....	76,983	73,106	50,263	100.0	96.8	64.5
October.....	75,588	75,291	52,840	98.2	99.5	69.4
November.....	73,654	75,648	53,166	95.7	100.0	70.0
December.....	74,318	75,258	51,024	96.5	99.5	67.7

<sup>1</sup> The figures for 1914 and 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during the month.

In 1914, January shows the highest average number of wage earners, practically the same number

being reported for September also. The minimum number was reported for May, and formed 93.8 per cent of the number shown for January. In 1909 and 1904 the month of maximum employment was November, and the months of minimum employment, May and June, respectively. The greatest difference between the maximum and minimum numbers in any one of the three census years, was 9,569, shown for 1909.

Table 10 gives the total average number of wage earners employed during 1914, together with the total number employed on the 15th of each month, or the nearest representative day, for the combined industries of the state, for a number of selected industries, and for the total industries of each of the 24 cities having more than 10,000 inhabitants.

**Table 10**

WAGE EARNERS: 1914.  
[Month of maximum employment for each industry and city is indicated by boldface figures and that of minimum by italic figures.]

INDUSTRY AND CITY.	Average number employed during year.	Number employed on 15th day of the month or nearest representative day.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
All industries.....	74,853	<b>76,993</b>	75,559	74,217	73,261	<i>72,210</i>	73,078	75,779	76,587	76,983	75,588	73,654	74,318	93.8
Bread and other bakery products.....	1,949	<b>1,883</b>	1,927	1,940	1,950	1,895	1,923	1,940	2,054	1,950	1,977	1,954	1,980	91.7
Brick, tile, pottery, and other clay products.....	1,811	<b>1,802</b>	1,803	1,947	2,018	2,008	2,025	<b>2,044</b>	1,999	1,970	1,532	1,445	1,370	67.0
Cars and general shop construction and repairs by electric-railroad companies.....	583	<b>600</b>	643	606	560	599	<b>648</b>	581	557	548	570	537	532	82.1
Cars and general shop construction and repairs by steam-railroad companies.....	10,915	<b>11,118</b>	11,015	10,998	10,641	<i>10,410</i>	10,545	10,987	11,190	11,163	11,085	10,832	10,996	93.0
Cement.....	583	<b>527</b>	439	498	519	474	<b>720</b>	714	692	651	648	541	606	60.6
Clothing, men's.....	1,062	<b>1,125</b>	1,155	1,150	1,155	1,104	1,111	1,077	1,080	986	982	993	916	78.2
Confectionery.....	773	<b>733</b>	781	788	768	700	737	730	766	701	806	809	807	90.2
Copper, tin, and sheet-iron work.....	728	<b>709</b>	703	706	738	744	765	762	746	747	719	691	716	90.3
Cotton goods.....	1,875	<b>1,812</b>	1,811	1,830	1,873	1,839	1,846	1,888	1,910	1,867	1,943	1,912	1,960	92.4
Flour-mill and gristmill products.....	1,300	<b>1,307</b>	1,288	1,261	1,240	1,271	1,285	1,314	1,379	1,355	1,308	1,295	1,291	90.4
Foundry and machine-shop products.....	3,036	<b>3,191</b>	3,166	3,218	3,304	3,342	3,174	3,162	3,076	2,940	2,702	2,585	2,578	77.0
Furniture and refrigerators.....	595	<b>705</b>	730	743	711	680	660	611	611	423	418	388	400	52.2
Gas, illuminating and heating.....	613	<b>550</b>	516	540	550	591	569	626	620	582	685	718	791	65.2
Ice, manufactured.....	1,026	<b>1,250</b>	1,278	1,425	1,808	2,202	2,635	2,810	2,701	2,530	1,855	1,365	1,193	42.5
Leather goods.....	640	<b>720</b>	709	692	626	650	650	660	570	515	480	560	624	62.5
Liquors, malt.....	958	<b>859</b>	885	892	917	987	1,018	1,094	1,050	1,019	1,008	891	867	78.5
Lumber and timber products.....	19,950	<b>20,802</b>	20,810	20,567	20,712	20,385	20,349	<b>21,536</b>	21,190	19,247	18,192	17,584	18,035	81.4
Marble and stone work.....	404	<b>471</b>	455	484	476	492	486	476	459	409	449	434	416	84.3
Oil, cottonseed, and cake.....	4,471	<b>6,240</b>	4,821	2,901	1,828	1,344	1,297	1,078	3,018	6,916	7,801	7,968	7,760	16.3
Printing and publishing.....	4,690	<b>4,738</b>	4,650	4,704	4,707	4,727	4,692	4,699	4,680	4,641	4,709	4,680	4,707	97.5
Rice, cleaning and polishing.....	245	<b>488</b>	502	415	410	250	140	131	160	334	376	447	472	26.1
Slaughtering and meat packing.....	3,401	<b>3,660</b>	3,812	3,667	3,622	3,368	3,172	3,171	2,945	3,140	3,618	3,789	3,722	76.2
Turpentine and rosin.....	809	<b>862</b>	794	803	701	818	826	848	862	828	756	731	789	84.8
Wood preserving.....	350	<b>430</b>	380	411	433	346	283	373	340	271	302	291	331	62.6
All other industries.....	10,930	<b>10,306</b>	10,450	10,723	10,881	10,924	11,517	11,813	<b>11,914</b>	11,376	10,607	10,374	10,866	86.2
Total for cities.....	31,780	<b>32,562</b>	32,308	31,002	31,721	31,604	31,354	32,128	32,121	32,038	31,520	30,831	31,389	94.7
ABILENE.....	107	<b>112</b>	110	98	111	100	114	90	96	104	107	113	129	69.8
AMARILLO.....	311	<b>315</b>	302	307	298	321	278	308	323	322	323	318	317	80.1
AUSTIN.....	891	<b>935</b>	942	952	858	855	879	859	853	906	912	861	880	89.6
BEAUMONT.....	1,073	<b>1,158</b>	1,195	1,190	1,180	991	1,035	1,020	1,013	991	1,038	1,002	1,054	82.9
BROWNSVILLE.....	76	<b>66</b>	63	65	70	70	87	78	89	88	87	84	65	70.8
CLEBURNE.....	886	<b>891</b>	915	854	878	850	868	877	887	906	919	902	936	88.4
DALLAS.....	5,284	<b>5,433</b>	5,479	5,570	5,537	5,506	5,432	5,439	5,383	4,981	4,922	4,786	4,940	85.9
DENSON.....	954	<b>832</b>	811	812	832	773	804	1,078	1,059	1,154	1,059	1,057	1,035	67.0
EL PASO.....	2,347	<b>2,269</b>	2,250	2,342	2,402	2,465	2,397	2,393	2,413	2,387	2,342	2,249	2,279	91.2
FORT WORTH.....	2,308	<b>2,280</b>	2,250	2,325	2,360	2,356	2,361	2,388	2,401	2,314	2,274	2,168	2,210	89.9
GALVESTON.....	1,410	<b>1,417</b>	1,391	1,345	1,345	1,407	1,403	1,427	1,425	1,487	1,432	1,405	1,435	90.5
HOUSTON.....	5,607	<b>6,037</b>	5,774	5,520	5,582	5,790	5,576	5,550	5,560	5,619	5,519	5,419	5,439	88.1
LAREDO.....	270	<b>269</b>	265	276	297	300	296	204	255	249	273	251	246	81.7
MARSHALL.....	1,166	<b>1,188</b>	1,178	1,197	1,171	1,119	1,104	1,131	1,144	1,165	1,180	1,211	1,204	91.2
PALESTINE.....	648	<b>704</b>	705	687	480	389	443	583	700	784	800	673	762	48.3
PARIS.....	513	<b>527</b>	594	507	532	536	468	555	488	474	471	467	543	77.8
SAN ANGELO.....	161	<b>147</b>	143	146	154	170	179	176	174	178	154	154	153	79.3
SAN ANTONIO.....	4,083	<b>4,114</b>	4,082	4,021	3,900	3,946	3,985	4,146	4,226	4,131	4,148	4,146	4,091	93.4
SHERMAN.....	389	<b>382</b>	408	424	371	374	384	453	412	382	387	373	378	72.2
TEMPLE.....	342	<b>387</b>	324	388	292	303	311	320	330	415	374	376	375	69.4
TEXARKANA.....	355	<b>1,030</b>	977	1,053	1,032	1,079	917	873	928	883	818	955	915	75.8
TYLER.....	506	<b>472</b>	516	512	526	502	503	517	499	524	507	480	514	59.7
WACO.....	1,125	<b>1,219</b>	1,173	1,102	1,097	1,063	1,110	1,125	1,106	1,199	1,123	1,103	1,080	87.2
WICHITA FALLS.....	377	<b>368</b>	357	337	338	333	366	436	389	395	411	389	405	76.4

Of the industries shown in Table 10, oil, cotton seed and cake and rice, cleaning and polishing show the greatest fluctuation in number of wage earners reported, but as these are seasonal industries this fluctuation is not abnormal. The greatest stability of employment is shown for printing and publishing, while steam-railroad repair shops ranked second in this respect. For each of five other industries, bread and other bakery products, cotton goods, copper, tin, and sheet-iron work, confectionery, and flour-mill and gristmill products the fluctuation was less than 10 per cent.

San Antonio, the largest city in Texas, shows the greatest stability of employment, the least number employed representing 93.4 per cent of the greatest. In El Paso, Galveston, and Marshall, the minimum number employed was in each case more than 90 per cent of the maximum. In three other cities, Abilene,

Denison, and Temple, the corresponding percentages were less than 70. Palestine shows the greatest fluctuation, the percentage that the minimum number formed of the maximum for this city being only 48.3, due largely to the curtailment of work during April, May, and June in the railroad repair shops of the town.

**Prevailing hours of labor.**—In Table 11 the average number of wage earners reported for, 1914 and 1909, for all industries combined and for selected industries, have been classified according to the number of hours of labor per week prevailing in the establishments in which they were employed. A similar classification is given, for 1914 only for all industries combined in each city having more than 10,000 inhabitants. The number employed in each establishment is classified as a total, even though a few employees worked a greater or smaller number of hours.

Table 11

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.								
		Total.	In establishments where the prevailing hours of labor per week were—							
			48 and under.	Between 48 and 54.	54	Between 54 and 60.	60	Between 60 and 72.	72	Over 72.
All Industries.....	1914	74,853	12,374	1,684	16,633	2,765	28,079	5,577	4,693	2,448
	1909	70,230	6,575	1,850	12,945	2,981	30,588	8,318	4,188	2,784
Bread and other bakery products.....	1914	1,940	179	21	422	94	1,030	155	23	25
	1909	1,891	60	6	125	11	882	201	50	50
Brick, tile, pottery, and other clay products.....	1914	1,811	138	27	174	44	1,428	.....	.....	.....
	1909	2,355	20	31	222	43	1,907	128	4	.....
Cars and general shop construction and repairs by electric-railroad companies.....	1914	583	92	11	15	7	131	159	.....	168
	1909	230	34	.....	.....	.....	89	106	.....	1
Cars and general shop construction and repairs by steam-railroad companies.....	1914	10,015	4,727	130	3,180	.....	1,151	1,727	.....	.....
	1909	9,782	1,069	153	5,092	727	1,727	1,067	.....	7
Cement.....	1914	583	.....	.....	.....	.....	141	280	.....	150
	1909	302	.....	.....	.....	.....	38	.....	.....	324
Clothing, men's.....	1914	1,062	788	28	131	.....	115	.....	.....	.....
	1909	992	521	155	83	22	211	.....	.....	.....
Confectionery.....	1914	773	15	114	215	233	186	.....	10	.....
	1909	717	22	2	64	72	545	12	.....	.....
Copper, tin, and sheet-iron work.....	1914	728	407	23	159	10	68	1	.....	.....
	1909	733	401	.....	197	.....	74	1	.....	.....
Cotton goods.....	1914	1,875	.....	.....	170	.....	1,338	367	.....	.....
	1909	1,590	.....	.....	.....	.....	307	1,193	.....	.....
Flour-mill and gristmill products.....	1914	1,300	22	1	103	94	475	161	438	6
	1909	1,210	108	.....	2	.....	281	200	625	.....
Foundry and machine-shop products.....	1914	3,036	147	316	2,160	139	260	.....	.....	14
	1909	2,925	50	283	1,772	35	773	4	8	.....
Furniture and refrigerators.....	1914	595	171	4	252	.....	168	.....	.....	.....
	1909	701	17	.....	480	21	183	.....	.....	.....
Gas, illuminating and heating.....	1914	613	6	.....	141	7	89	318	.....	52
	1909	575	10	.....	33	65	186	134	45	102
Ice, manufactured.....	1914	1,926	12	.....	30	75	167	445	280	908
	1909	1,437	36	10	.....	40	121	97	181	940
Leather goods.....	1914	640	9	4	523	42	62	.....	.....	.....
	1909	721	6	1	32	382	300	.....	.....	.....
Liquors, malt.....	1914	958	851	53	.....	.....	4	50	.....	.....
	1909	765	273	.....	24	466	2	.....	.....	.....
Lumber and timber products.....	1914	19,956	370	406	965	346	16,625	1,120	12	106
	1909	23,518	932	335	784	315	16,961	4,471	.....	.....
Marble and stone work.....	1914	404	251	29	149	13	13	9	.....	.....
	1909	605	333	59	110	37	66	.....	.....	.....
Oil, cottonseed, and cake.....	1914	4,471	.....	.....	18	63	341	280	3,736	33
	1909	3,073	33	.....	.....	.....	206	110	2,565	159
Printing and publishing.....	1914	4,690	2,946	204	923	332	261	22	2	.....
	1909	4,408	2,101	608	759	320	407	29	4	.....

Table 11—Continued.

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.							
		Total.	In establishments where the prevailing hours of labor per week were—						
			48 and under.	Between 48 and 54.	54	Between 54 and 60.	60	Between 60 and 72.	Over 72.
Rice, cleaning and polishing.....	1914	345	16	18	.....	.....	37	153	121
	1909	430	.....	.....	.....	.....	164	180	106
Slaughtering and meat packing.....	1914	3,491	21	57	2,697	.....	714	2	.....
	1909	3,639	9	.....	1,631	.....	1,940	.....	50
Turpentine and resins.....	1914	809	.....	.....	.....	.....	809	.....	.....
	1909	210	100	.....	.....	.....	119	.....	.....
Wood preserving.....	1914	350	.....	.....	.....	.....	350	.....	.....
	1909	417	15	.....	.....	.....	363	30	.....
All other industries.....	1914	10,930	1,140	238	4,197	1,266	2,716	322	71
	1909	7,429	635	187	1,535	419	2,542	367	503
Total for cities.....	1914	31,789	9,869	1,306	9,304	956	5,496	2,627	1,305
ABILENE.....	1914	107	30	5	.....	.....	80	18	24
AMARILLO.....	1914	311	35	.....	39	1	200	22	11
AUSTIN.....	1914	891	274	.....	136	114	92	39	60
BEAUMONT.....	1914	1,073	92	29	331	26	460	100	35
BROWNSVILLE.....	1914	70	.....	.....	24	2	7	14	25
CLEBURNE.....	1914	886	28	0	51	6	9	757	16
DALLAS.....	1914	5,284	988	643	2,146	62	1,075	116	141
DENISON.....	1914	954	808	.....	42	.....	19	44	11
EL PASO.....	1914	2,347	793	36	812	105	424	129	15
FORT WORTH.....	1914	2,308	984	173	280	119	519	158	43
GALVESTON.....	1914	1,410	544	42	315	142	132	221	1
HOUSTON.....	1914	5,607	1,288	165	2,776	59	742	131	382
LAREDO.....	1914	270	13	.....	9	.....	209	18	.....
MARSHALL.....	1914	1,166	889	.....	186	8	59	.....	24
PALESTINE.....	1914	648	561	.....	10	.....	27	32	13
PARIS.....	1914	513	80	4	72	.....	235	10	66
SAN ANGELO.....	1914	161	73	.....	31	7	26	24	.....
SAN ANTONIO.....	1914	4,083	1,347	223	1,528	167	291	328	117
SHERMAN.....	1914	389	94	.....	32	14	97	56	85
TEMPLE.....	1914	342	45	7	74	.....	17	114	60
TEXARKANA.....	1914	955	78	57	25	3	490	202	44
TYLER.....	1914	506	444	.....	8	.....	14	.....	18
WACO.....	1914	1,125	262	6	336	121	188	60	92
WICHITA FALLS.....	1914	377	151	.....	41	.....	134	34	17

The figures in this table, for the state as a whole and for the selected industries, emphasize the tendency toward a shorter working day for wage earners. In 1909, 45, 873, or nearly two-thirds of the total average number of wage earners for all industries combined were employed in establishments where the prevailing hours of labor were 60 or more per week, whereas only 41,397, or a little more than one-half, were so employed in 1914. On the other hand, the number of wage earners in establishments where the prevailing hours were 54 or less per week increased from 21,376, or more than three-tenths of the total for the state in 1909, to 30,691, or more than two-fifths of the total in 1914.

Among the separate industries, the steam-railroad repair shops and breweries, show the greatest decrease in hours of labor. In 1909, in these industries the wage earners in establishments where the prevailing working hours were less than 54 per week formed 11.9 per cent and 35.7 per cent, of the total, respectively, but in 1914 these proportions had increased to 44.5 and 94.4, respectively.

Five industries in 1914—clothing, men's; copper, tin, and sheet-iron work; liquors, malt; marble and stone work; and printing and publishing—show a majority of the wage earners employed less than 54 hours a week; while six industries—electric-railroad

repair shops, cleaning and polishing rice, and the manufacture of cement, gas, ice, and cottonseed oil and cake—show a majority employed more than 60 hours per week.

Of the combined total average number of wage earners for the 24 cities—31,789—in 1914, 20,569 or 64.7 per cent, were in establishments where the prevailing hours were 54 or less per week, while only 4,768, or 15 per cent, were in establishments in which the hours of labor were over 60 per week. For the three largest cities, the greatest number of wage earners was reported by those establishments where the prevailing hours of labor were 54 per week, these wage earners with those working shorter hours together formed more than 70 per cent of the total for each city. In Denison, Marshall, Palestine, and Tyler, the greatest proportion of wage earners were employed 48 hours or less per week, these proportions being 84.7, 76.2, 86.6, and 87.7 per cent, respectively.

**Location of establishments.**—Table 12 shows, for 1914, 1909, and 1899, the extent to which the manufactures in Texas were centralized in cities having more than 10,000 inhabitants.

In accepting the statistics in this table, it must be remembered that Brownsville, Cleburne, Marshall, San Angelo, and Temple, each having a population of 10,000 or more in 1909, were included with the outside

districts in 1904, and that Abilene, Amarillo, Texarkana, and Wichita Falls, each having a population of 10,000 and over at the census of 1914, were included with the outside districts at prior censuses. The table shows that in 1914 the 24 cities, which represent 18.8 per cent of the estimated population of the state, re-

ported 40.7 per cent of the total number of establishments, 42.5 per cent of the average number of wage earners, 49.8 per cent of the total value added by manufacture, and 38.7 per cent of the total value of products.

Table 12

Table 12	Census year.	Aggregate.	CITIES HAVING A POPULATION OF 10,000 OR OVER.								DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 OR OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.		Number or amount.	Per cent of aggregate.
			Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.		
Number of places.....	1914	24	24	-----	15	-----	6	-----	3	-----	-----	-----
	1910	20	20	-----	12	-----	8	-----	-----	-----	-----	-----
	1900	11	11	-----	6	-----	5	-----	-----	-----	-----	-----
Population <sup>1</sup> .....	1914	4,257,854	801,465	18.8	188,981	4.4	281,398	6.6	331,090	7.8	3,456,380	81.2
	1910	3,896,542	820,712	15.9	147,337	3.8	473,375	12.1	-----	-----	3,275,830	84.1
	1900	3,043,710	299,398	9.8	94,320	3.1	205,069	6.7	-----	-----	2,749,312	90.2
Number of establishments.....	1914	5,084	2,071	40.7	425	8.4	719	14.1	927	18.2	3,013	59.3
	1909	4,588	1,614	35.2	350	7.6	1,264	27.6	-----	-----	2,074	61.8
	1899	3,107	870	28.3	276	8.9	603	19.4	-----	-----	2,228	71.7
Average number of wage earners..	1914	74,853	31,789	42.5	7,061	10.2	9,154	12.2	14,074	20.0	43,064	57.5
	1909	70,230	28,303	37.5	6,280	9.0	20,017	28.5	-----	-----	43,927	62.5
	1899	38,004	14,647	37.9	3,500	9.2	11,078	28.7	-----	-----	23,057	62.1
Value of products.....	1914	\$361,270,303	\$139,020,138	38.7	\$26,171,084	7.2	\$38,074,831	10.8	\$74,782,323	20.7	\$221,350,165	61.3
	1909	272,896,035	106,559,057	40.1	19,028,547	7.3	89,630,510	32.8	-----	-----	163,336,578	59.9
	1899	92,894,433	37,030,229	39.9	6,004,458	7.4	30,131,771	32.4	-----	-----	55,858,204	60.1
Value added by manufacture. ....	1914	108,135,042	53,802,042	49.8	8,080,694	8.3	15,814,566	14.6	28,998,382	26.8	54,332,400	50.2
	1909	94,717,120	42,844,070	45.2	7,074,911	7.5	35,770,050	37.8	-----	-----	51,872,150	54.8
	1899	33,596,130	16,410,342	42.6	2,064,238	7.8	13,416,004	34.8	-----	-----	22,095,888	57.4

<sup>1</sup> Census estimate of population for 1914.

<sup>2</sup> The population as returned at the census of 1910 is used for San Angelo in 1914. Since that city was incorporated in 1903 no figures for 1900 are available for an estimate of population in 1914.

Dallas, Houston, and San Antonio, each having a population of more than 100,000 in 1914, reported one-fifth of all the wage earners employed in the state and over one-fifth of the total value of products. The 6 cities having a population between 25,000 and 100,000 reported more than one-tenth of the wage earners and value of products. Comparing the two groups mentioned with the larger group for 1909 shows an increase of more than 25 per cent in the value of products.

The relative importance in manufactures of each of the 24 cities having more than 10,000 inhabitants, as measured by average number of wage earners and by value of products, in 1914, 1909, and 1904, is shown in Table 13. The cities are listed in the order of their importance as shown by value of products. Those for which comparative figures are not shown for 1909 and 1904 had fewer than 10,000 inhabitants in those years.

The greatest relative gain in value of products shown from 1909 to 1914—68.7 per cent—appears for El Paso. Next in order are Paris, Denison, San Angelo, Laredo, and Sherman, with 59.7, 57.5, 57, 56, and 50.3 per cent, respectively.

The greatest actual increase—\$4,414,343—is shown for San Antonio. The cities held the same or nearly the same rank in 1914 as in 1909. El Paso moved up from ninth place in 1909 to seventh in 1914 and Paris from thirteenth to twelfth, while Marshall dropped from eleventh in 1909 to fourteenth in 1914.

Table 13

CITY.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1914	1909	1904	1914	1909	1904
Dallas.....	5,284	4,882	3,445	\$31,065,073	\$26,058,604	\$15,627,068
Houston.....	5,007	5,338	5,056	25,808,010	23,015,556	13,564,019
San Antonio.....	4,083	3,105	2,457	17,849,210	13,431,897	7,402,262
Fort Worth.....	2,308	2,059	1,423	9,073,882	8,600,882	5,668,391
Galveston.....	1,410	1,094	761	8,691,060	6,308,076	2,996,054
Sherman.....	389	273	307	7,027,747	4,675,971	2,641,086
El Paso.....	2,347	1,752	1,158	6,135,214	3,637,577	2,377,813
Waco.....	1,125	1,033	947	6,011,737	4,769,358	2,979,800
Beaumont.....	1,073	863	732	5,101,055	4,830,591	2,609,829
Austin.....	801	754	641	3,370,974	2,845,500	1,569,353
Wichita Falls.....	.....	.....	.....	2,572,785	.....	.....
Paris.....	513	541	210	2,283,875	1,420,943	854,930
Cleburne.....	856	825	.....	2,246,263	1,576,572	.....
Marshall.....	1,166	977	.....	2,000,355	1,787,146	.....
Denison.....	954	833	725	2,088,788	1,313,785	1,224,056
Texarkana.....	955	.....	.....	1,994,009	.....	.....
Temple.....	342	366	.....	1,451,025	1,345,770	.....
Palestine.....	648	745	544	1,222,160	1,312,845	735,162
Amarillo.....	311	.....	.....	896,087	.....	.....
Tyler.....	506	494	368	896,540	996,243	628,666
San Angelo.....	161	115	.....	400,148	317,861	.....
Laredo.....	270	213	515	314,811	221,074	453,974
Abilene.....	107	.....	.....	311,346	.....	.....
Brownsville.....	76	51	.....	167,136	120,746	.....

Dallas was the leading city in the state in the value of manufactured products. The principal industries are slaughtering and meat packing, flour milling and gristmilling, printing and publishing, the manufacture of cottonseed oil and cake, foundry and machine-shop products, leather goods, and bread and bakery products. Of these industries the first two and cottonseed oil and cake can not be shown separately without the possibility of disclosing individual operations. Dallas is the center of the leather-goods industry, including the manufacture of saddlery and harness and

trunks, and contributed over one-half of the total value of products for the state in 1914.

The leading industry in Houston in 1914 was the manufacture of cottonseed oil. Other important industries were slaughtering and meat packing, breweries, cleaning and polishing rice, printing and publishing, steam-railroad repair shops, foundries and machine shops, the manufacture of cotton and burlap bags, bread and bakery products, and roasting and grinding coffee. The statistics for slaughtering and meat packing, breweries, steam-railroad repair shops, and cotton and burlap bags can not be shown separately.

San Antonio ranked third in the value of manufactures in 1914, but some of the principal industries—the breweries and the slaughtering and meat-packing industry—can not be shown separately. Other important industries are the manufacture of flour-mill and gristmill products, foundry and machine-shop products, and cottonseed oil and cake.

Fort Worth is the fourth city in value of manufactured products. It should be stated, however, that important slaughtering and meat-packing establishments are located just outside the corporate limits of the city. If these were included in the total for the city, the rank of Fort Worth among the cities of the state in the value of its manufactures would be much higher. The leading industries within the city, named in the order of their importance, are flour mills and gristmills, printing and publishing, steam-railroad repair shops, and butter making.

In 1914 El Paso ranked fifth among the cities of the state in population and seventh in value of manufac-

tures. The leading industries within the corporate limits of the city are steam-railroad repair shops, printing and publishing, wooden packing boxes, roasting and grinding coffee, and foundries and machine shops. Some of these, however, are not shown. The copper smelting works located near the city limits contributed a large amount to the value of the products of the state and reported wage earners equaling one-third of the number reported by establishments within the city limits.

In the remaining cities shown in Table 13, the most important industries in 1914 were the manufacture of flour-mill and gristmill and cottonseed products in Austin, Galveston, Paris, Sherman, and Waco; the steam-railroad repair shops in Cleburne, Denison, Laredo, Marshall, Palestine, San Angelo, and Tyler; the cottonseed-oil industry in Abilene and Temple; the flour-mill and gristmill industry in Amarillo and Wichita Falls; the cleaning and polishing of rice and flour mills in Beaumont; the manufacture of ice in Brownsville; and cooperage in Texarkana.

**Character of ownership.**—Table 14 presents statistics concerning character of ownership, or legal organization, of manufacturing enterprises. For all industries combined, comparative figures are given for 1914, 1909, and 1904; for selected industries, statistics for 1914 and 1909 are shown; and for individual cities, the figures are for all industries combined and relate only to 1914. In order to avoid disclosing the operations of individual establishments, it is necessary to omit several important industries from this table.

Table 14

INDUSTRY AND CITY.	Con-sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
		Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
						Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.		Indi-vid-u-als.	Cor-pora-tions.	All others.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.				
All industries.....	1914	2,651	1,486	947	74,853	8,569	60,541	5,743	11.4	80.9	7.7	\$361,279,303	\$24,816,967	\$313,703,277	\$22,759,059	6.9	86.8	6.3				
	1909	2,200	1,352	946	70,230	9,295	54,697	6,238	13.2	77.9	8.9	272,896,635	23,161,308	231,059,361	18,674,966	8.5	84.7	6.8				
	1904	1,076	839	643	49,066	7,320	36,905	4,841	14.9	75.2	9.9	150,528,389	16,408,988	120,133,146	13,986,255	10.9	79.8	9.3				
Bread and other bakery products.	1914	442	15	73	1,940	1,017	633	299	52.2	32.5	15.3	7,503,298	3,933,192	2,385,990	1,184,116	52.4	31.8	15.8				
	1909	324	14	47	1,391	697	554	140	50.1	39.8	10.1	5,310,785	2,817,168	1,821,283	672,344	53.0	34.8	12.7				
Flour-mill and gristmill products.	1914	78	71	42	1,300	154	941	205	11.8	72.4	15.8	35,110,301	1,995,021	27,061,885	6,053,395	5.7	77.1	17.2				
	1909	81	98	59	1,216	144	892	180	11.8	73.4	14.8	32,484,612	2,585,772	24,926,692	4,972,248	8.0	76.7	15.3				
Foundry and machine-shop products.	1914	75	60	42	3,036	457	2,332	247	15.1	76.8	8.1	8,782,481	1,115,496	7,128,438	538,547	12.7	81.2	6.1				
	1909	59	54	30	2,925	303	2,446	176	10.4	83.6	6.0	8,067,941	779,857	6,707,188	490,896	9.7	84.2	6.1				
Ice, manufactured.....	1914	36	179	40	1,926	115	1,676	135	6.0	87.0	7.0	5,328,302	267,097	4,629,499	431,706	5.0	86.9	8.1				
	1909	37	128	17	1,437	210	1,162	75	14.6	80.2	5.2	3,844,120	519,927	3,074,350	249,837	13.5	80.0	6.5				
Leather goods.....	1914	43	19	25	640	87	432	121	13.6	67.5	18.9	3,567,371	268,897	2,768,158	530,316	7.5	77.6	14.9				
	1909	33	19	15	721	117	491	113	16.2	68.1	15.7	4,347,445	384,933	3,847,763	614,749	8.9	77.0	14.1				
Lumber and timber products.	1914	286	141	160	19,956	1,693	16,306	1,957	8.5	81.7	9.8	28,740,614	2,473,877	23,446,962	2,819,775	8.6	81.6	9.8				
	1909	350	182	267	23,518	3,035	17,245	3,238	12.9	73.3	13.8	32,201,440	3,539,010	24,068,094	4,604,336	11.0	74.7	14.3				
Oil, cottonseed, and cake..	1914	21	192	20	4,471	353	3,899	219	7.9	87.2	4.9	41,944,689	2,757,792	37,300,135	1,886,762	6.6	88.9	4.5				
	1909	17	172	5	3,073	254	2,779	40	8.3	90.4	1.3	29,915,772	2,350,310	27,377,843	187,610	7.9	91.5	0.6				
Printing and publishing..	1914	774	189	225	4,690	1,463	2,575	652	31.2	54.9	13.9	15,051,269	3,417,858	9,701,286	1,932,125	22.7	64.5	12.8				
	1909	678	159	230	4,408	1,297	2,310	801	29.4	52.4	18.2	11,587,255	2,726,781	7,080,296	1,780,178	23.5	61.1	15.4				
Total for cities.....	1914	903	699	379	31,789	4,509	24,504	2,776	14.2	77.1	8.7	139,929,138	14,207,149	110,812,897	14,909,092	10.2	79.2	10.7				
ABILENE.....	1914	10	6	2	107	138	69	.....	135.5	64.5	.....	311,346	129,155	182,191	.....	41.5	58.5	.....				
AMARILLO.....	1914	19	7	10	311	44	227	40	14.1	73.0	12.9	986,087	135,955	704,137	145,995	13.8	71.4	14.8				
AUSTIN.....	1914	58	20	36	891	208	493	190	23.3	55.3	21.3	3,370,974	848,436	1,603,512	919,020	25.2	47.6	27.3				
BEAUMONT.....	1914	24	33	10	1,073	120	884	69	11.2	82.4	6.4	5,191,055	506,679	3,676,681	1,007,695	9.8	70.8	19.4				
BROWNSVILLE.....	1914	10	3	1	76	134	42	.....	144.7	55.3	.....	167,136	160,454	106,682	.....	36.2	63.8	.....				

<sup>1</sup> Includes the group "all others."





ucts valued at \$100,000 and over. These establishments reported more than three-fifths of the wage earners and an increased proportion of the value of products at each successive census. This proportion was 72.4 per cent in 1904, 78.4 per cent in 1909, and 83.5 per cent in 1914.

Table 16 gives, for 1914 and 1909, for 11 of the more important industries, a classification of the number of establishments, wage earners, value of products, and value added by manufacture, similar to that presented in Table 15 for all industries combined.

INDUSTRY AND VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.				AVERAGE NUMBER OF WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
			Per cent distribution.				Per cent distribution.				Per cent distribution.				Per cent distribution.	
	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909
<b>BREAD AND OTHER BAKERY PRODUCTS.....</b>	530	385	100.0	100.0	1,949	1,391	100.0	100.0	\$7,503,298	\$5,310,785	100.0	100.0	\$3,301,461	\$2,248,540	100.0	100.0
Less than \$5,000.....	221	163	41.7	42.3	131	93	6.7	6.7	632,186	443,254	8.4	8.3	284,641	192,032	8.5	8.5
\$5,000 to \$20,000.....	235	173	44.3	44.9	563	448	28.9	32.2	2,187,017	1,752,040	29.1	33.0	1,002,531	782,056	29.8	34.8
\$20,000 to \$100,000.....	69	45	13.0	11.7	689	403	35.4	29.0	2,612,829	1,575,177	34.8	29.7	1,059,848	670,329	31.5	29.8
\$100,000 and over <sup>1</sup> .....	5	4	0.9	1.0	566	447	29.0	32.1	2,071,266	1,540,314	27.6	29.0	1,014,441	604,123	30.2	26.9
<b>BRICK, TILE, POTTERY, AND OTHER CLAY PRODUCTS.....</b>	81	106	100.0	100.0	1,811	2,355	100.0	100.0	2,378,419	3,141,928	100.0	100.0	1,444,636	2,181,103	100.0	100.0
Less than \$5,000.....	18	28	22.2	26.4	62	98	3.4	4.2	48,868	76,946	2.1	2.4	34,608	61,333	2.4	2.8
\$5,000 to \$20,000.....	25	32	30.9	30.2	204	405	14.6	17.2	234,970	382,706	9.9	12.2	151,047	269,634	10.5	12.4
\$20,000 and over <sup>2</sup> .....	38	46	46.9	43.4	1,485	1,852	82.0	78.6	2,094,581	2,682,186	88.1	85.4	1,258,981	1,850,136	87.1	84.8
<b>CARS AND GENERAL SHOP CONSTRUCTION AND REPAIRS BY STEAM-RAILROAD COMPANIES.....</b>	63	62	100.0	100.0	10,915	9,782	100.0	100.0	15,276,387	13,358,948	100.0	100.0	9,297,959	7,812,818	100.0	100.0
Less than \$20,000 <sup>3</sup> .....	8	8	12.7	12.9	98	86	0.9	0.9	87,704	93,722	0.6	0.7	59,755	61,183	0.6	0.8
\$20,000 to \$100,000.....	10	21	30.2	33.0	640	738	5.9	7.5	843,028	1,030,944	5.5	7.8	524,071	610,285	5.6	7.8
\$100,000 and over <sup>1</sup> .....	36	33	57.1	53.2	10,177	8,958	93.2	91.6	14,345,055	12,225,282	93.9	91.6	8,714,133	7,141,850	93.7	91.4
<b>FLOUR-MILL AND GRISTMILL PRODUCTS.....</b>	191	238	100.0	100.0	1,300	1,216	100.0	100.0	35,110,301	32,484,612	100.0	100.0	5,537,114	3,827,971	100.0	100.0
Less than \$5,000.....	44	55	23.0	23.1	28	39	2.1	3.2	120,014	157,754	0.3	0.5	34,559	33,860	0.6	0.9
\$5,000 to \$20,000.....	48	67	25.1	28.2	80	95	6.1	7.8	512,312	729,934	1.5	2.2	113,713	180,859	2.1	3.4
\$20,000 to \$100,000.....	41	60	21.5	25.2	123	187	9.5	15.4	1,752,997	2,847,449	5.0	8.8	207,658	365,954	4.8	9.6
\$100,000 to \$1,000,000.....	50	48	26.2	20.2	686	570	52.8	46.9	10,727,433	17,034,774	50.2	52.4	2,996,146	1,911,138	54.1	49.9
\$1,000,000 and over.....	8	8	4.2	3.4	383	325	29.5	26.7	12,997,545	11,714,701	37.0	36.1	2,125,138	1,386,160	38.4	36.2
<b>FOUNDRY AND MACHINE-SHOP PRODUCTS.....</b>	177	143	100.0	100.0	3,036	2,925	100.0	100.0	8,782,481	8,067,941	100.0	100.0	4,761,397	4,208,470	100.0	100.0
Less than \$5,000.....	51	40	28.8	28.0	67	56	2.2	1.9	131,752	109,415	1.5	1.4	98,517	74,981	2.1	1.8
\$5,000 to \$20,000.....	66	41	37.3	28.7	324	182	10.7	6.2	667,986	420,361	7.6	5.2	468,854	259,018	9.8	6.2
\$20,000 to \$100,000.....	41	45	23.2	31.5	696	941	22.9	32.2	1,740,405	2,095,720	10.8	26.0	1,003,210	1,203,655	21.1	28.6
\$100,000 to \$1,000,000.....	19	17	10.7	11.9	1,949	1,746	64.2	59.7	6,242,338	5,442,445	71.1	67.5	3,191,016	2,670,816	67.0	63.5
<b>ICE, MANUFACTURED.....</b>	255	182	100.0	100.0	1,926	1,437	100.0	100.0	5,328,302	3,844,120	100.0	100.0	3,608,772	2,752,277	100.0	100.0
Less than \$5,000.....	52	30	20.4	16.5	94	53	4.9	3.7	160,372	88,011	3.0	2.3	98,970	51,981	2.7	1.9
\$5,000 to \$20,000.....	118	89	46.3	48.9	499	422	25.9	29.4	1,233,164	996,416	23.1	25.9	845,778	690,331	23.1	25.1
\$20,000 and over <sup>2</sup> .....	85	63	33.3	34.6	1,333	962	69.2	66.9	3,934,766	2,759,693	73.8	71.8	2,724,024	2,009,965	74.2	73.0
<b>LEATHER GOODS.....</b>	87	67	100.0	100.0	640	721	100.0	100.0	3,567,371	4,847,445	100.0	100.0	1,085,049	1,508,571	100.0	100.0
Less than \$5,000.....	30	10	41.4	14.9	37	15	5.8	2.1	105,251	24,789	3.0	0.6	63,442	16,606	5.8	1.1
\$5,000 to \$20,000.....	35	29	40.2	43.3	103	85	16.1	11.8	335,420	304,523	9.4	7.0	169,748	156,062	15.6	10.3
\$20,000 to \$100,000.....	8	17	9.2	25.4	70	117	10.9	16.2	304,754	473,920	8.5	10.9	173,241	208,068	16.0	13.8
\$100,000 to \$1,000,000.....	8	11	9.2	16.4	430	504	67.2	69.9	2,821,946	3,544,213	79.1	81.5	678,618	1,127,927	62.5	74.8
<b>LUMBER AND TIMBER PRODUCTS.....</b>	587	799	100.0	100.0	10,956	23,518	100.0	100.0	28,740,614	32,201,440	100.0	100.0	17,100,884	21,197,137	100.0	100.0
Less than \$5,000.....	247	268	42.1	33.5	763	965	3.8	4.1	603,088	677,573	2.1	2.1	440,358	535,117	2.6	2.5
\$5,000 to \$20,000.....	179	277	30.5	34.7	1,364	2,536	6.8	10.8	1,816,379	2,865,585	6.3	8.9	1,223,546	2,167,802	7.2	10.2
\$20,000 to \$100,000.....	92	171	15.7	21.4	2,488	5,100	12.5	21.7	4,173,421	7,321,010	14.5	22.7	2,404,893	4,828,209	14.1	22.8
\$100,000 and over <sup>1</sup> .....	69	83	11.7	10.4	15,341	14,017	70.9	63.4	22,147,726	21,337,272	77.1	66.3	13,032,087	13,666,009	76.2	64.5
<b>OIL, COTTONSEED AND CAKE.....</b>	233	194	100.0	100.0	4,471	3,073	100.0	100.0	41,944,689	29,915,772	100.0	100.0	5,768,113	6,476,711	100.0	100.0
Less than \$20,000 <sup>3</sup> .....	9	13	3.9	6.7	33	45	0.7	1.5	114,343	185,727	0.3	0.6	20,718	46,674	0.4	0.7
\$20,000 to \$100,000.....	75	84	32.2	43.3	804	864	18.0	28.1	5,052,173	5,611,685	12.0	18.8	680,275	1,185,847	11.8	18.3
\$100,000 to \$1,000,000.....	143	93	61.4	47.9	3,251	1,905	72.7	62.0	28,321,123	19,283,293	67.5	64.5	4,111,456	4,283,539	71.3	66.1
\$1,000,000 and over.....	6	4	2.6	2.1	383	250	8.6	8.4	8,457,050	4,835,067	20.2	16.2	955,064	960,651	16.6	14.8
<b>PRINTING AND PUBLISHING.....</b>	1,188	1,067	100.0	100.0	4,600	4,408	100.0	100.0	15,051,269	11,587,255	100.0	100.0	11,054,001	8,780,015	100.0	100.0
Less than \$5,000.....	752	684	63.3	64.1	784	853	16.7	19.4	1,785,412	1,590,081	11.9	13.8	1,458,704	1,280,812	13.2	14.7
\$5,000 to \$20,000.....	326	304	27.4	28.5	1,258	1,333	26.8	30.2	3,019,565	2,810,953	20.1	24.3	2,425,857	2,255,737	21.9	25.7
\$20,000 to \$100,000.....	84	50	7.1	5.5	1,181	918	25.2	20.8	3,297,642	2,498,110	21.9	21.6	2,371,281	1,824,074	21.5	20.8
\$100,000 and over <sup>1</sup> .....	26	20	2.2	1.9	1,467	1,304	31.3	29.6	6,948,050	4,679,111	46.2	40.4	4,768,159	3,410,392	43.4	38.8
<b>SLAUGHTERING AND MEAT PACKING.....</b>	21	14	100.0	100.0	3,491	3,639	100.0	100.0	52,990,000	42,529,746	100.0	100.0	8,532,880	5,119,961	100.0	100.0
Less than \$100,000 <sup>4</sup> .....	8	5	38.1	35.7	26	17	0.7	0.5	229,767	58,481	0.4	0.1	39,434	23,774	0.5	0.5
\$100,000 to \$1,000,000.....	9	5	42.9	35.7	263	188	7.5	5.2	3,178,127	1,533,664	6.0	3.6	640,286	329,358	7.5	6.4
\$1,000,000 and over.....	4	4	19.0	28.6	3,202	3,434	91.7	94.4	49,582,106	40,937,601	93.6	96.3	7,853,160	4,766,829	92.0	93.1

<sup>1</sup> Includes the group "less than \$5,000."

<sup>2</sup> Includes the group "\$5,000 to \$20,000."

<sup>3</sup> Includes the group "less than \$5,000."

<sup>4</sup> Includes the groups "less than \$5,000" and "\$5,000 to \$20,000."

Four of the industries, foundry and machine-shop products, manufactured ice, leather goods, and lumber and timber products, show a larger proportion of establishments in the class having a value of products less



than \$5,000 in 1914 than in 1909. The proportion of average number of wage earners, value of products, and value added by manufacture in this class has also increased for each of these industries except average number of wage earners and value of products for the lumber and timber industry.

For the class of establishments having products valued at \$100,000 or more in 1914, steam-railroad repair shops, flour-mills and gristmills, lumber and timber

mills, cottonseed-oil mills, and printing and publishing establishments show a larger proportion than in 1909 for every item in the table. The actual number of wage earners and amount of the value of product shown are also greater.

Table 17 presents, for 1914, for all industries combined in each of the 24 cities having more than 10,000 inhabitants, statistics similar to those given in Table 15 for the state as a whole.

Table 17											
CITY AND VALUE OF PRODUCT.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		CITY AND VALUE OF PRODUCT.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.	
		Average number.	Per cent of total.	Amount.	Per cent of total.			Average number.	Per cent of total.	Amount.	Per cent of total.
ABILENE.....	18	107	100.0	\$311,346	100.0	LAREDO.....	28	270	100.0	344,811	100.0
Less than \$5,000.....	0	5	4.7	10,655	5.3	Less than \$5,000.....	10	22	8.1	27,288	7.9
\$5,000 to \$20,000.....	0	24	22.4	71,365	22.9	\$5,000 to \$20,000.....	12	101	37.4	121,615	35.3
\$20,000 to \$100,000.....	0	78	72.9	223,326	71.7	\$20,000 to \$100,000.....	6	147	54.4	195,908	56.8
AMARILLO.....	36	311	100.0	986,087	100.0	MARSHALL.....	28	1,166	100.0	2,000,355	100.0
Less than \$5,000.....	13	16	5.1	43,118	4.4	Less than \$5,000.....	8	9	0.8	18,579	0.9
\$5,000 to \$20,000.....	15	58	18.6	167,005	16.9	\$5,000 to \$20,000.....	10	45	3.9	104,175	5.0
\$20,000 and over.....	8	237	76.2	775,964	78.7	\$20,000 to \$100,000.....	0	110	9.4	202,618	9.7
AUSTIN.....	114	891	100.0	3,370,974	100.0	\$100,000 to \$1,000,000.....	4	1,002	85.9	1,773,983	84.5
Less than \$5,000.....	38	28	3.1	90,562	3.0	PALESTINE.....	20	648	100.0	1,222,160	100.0
\$5,000 to \$20,000.....	49	150	16.8	471,010	14.0	Less than \$5,000.....	0	10	1.5	10,295	1.3
\$20,000 to \$100,000.....	18	357	40.1	903,088	26.8	\$5,000 to \$20,000.....	7	35	5.4	78,546	6.4
\$100,000 to \$1,000,000.....	9	356	40.0	1,897,314	56.3	\$20,000 and over.....	7	603	93.1	1,127,319	92.2
BEAUMONT.....	67	1,073	100.0	5,191,055	100.0	PARIS.....	42	513	100.0	2,283,875	100.0
Less than \$5,000.....	16	23	2.1	40,699	0.8	Less than \$5,000.....	11	8	1.6	28,706	1.3
\$5,000 to \$20,000.....	13	91	8.5	172,928	3.3	\$5,000 to \$20,000.....	14	66	12.9	178,013	7.8
\$20,000 to \$100,000.....	26	404	37.7	1,051,922	20.3	\$20,000 to \$100,000.....	9	131	25.5	415,569	18.2
\$100,000 to \$1,000,000.....	12	555	51.7	3,925,596	75.6	\$100,000 to \$1,000,000.....	8	308	60.0	1,001,497	72.7
BROWNSVILLE.....	14	79	100.0	167,136	100.0	SAN ANGELO.....	30	161	100.0	499,148	100.0
Less than \$5,000.....	5	7	9.2	9,840	5.9	Less than \$5,000.....	8	4	2.5	17,694	3.5
\$5,000 and over.....	9	69	90.8	157,296	94.1	\$5,000 to \$20,000.....	13	43	26.7	142,283	28.5
CLERBURNE.....	26	886	100.0	2,240,263	100.0	\$20,000 and over.....	9	114	70.8	339,171	67.9
Less than \$5,000.....	4	2	0.2	6,705	0.3	SAN ANTONIO.....	239	4,083	100.0	17,849,240	100.0
\$5,000 to \$20,000.....	13	42	4.7	122,969	5.5	Less than \$5,000.....	52	70	1.7	138,739	0.8
\$20,000 and over.....	9	842	95.0	2,116,829	94.2	\$5,000 to \$20,000.....	92	390	9.6	943,523	5.3
DALLAS.....	412	5,284	100.0	31,065,073	100.0	\$20,000 to \$100,000.....	68	1,018	24.9	3,172,217	17.8
Less than \$5,000.....	129	100	2.0	337,994	1.1	\$100,000 to \$1,000,000.....	24	2,187	53.6	8,138,394	45.0
\$5,000 to \$20,000.....	137	512	9.7	1,522,201	4.9	\$1,000,000 and over.....	3	418	10.2	5,456,377	30.6
\$20,000 to \$100,000.....	108	1,476	27.9	5,075,840	16.3	SHERMAN.....	36	389	100.0	7,027,747	100.0
\$100,000 to \$1,000,000.....	29	2,081	39.4	9,370,954	30.2	Less than \$5,000.....	9	18	3.3	23,641	0.3
\$1,000,000 and over.....	0	1,109	21.0	14,758,384	47.5	\$5,000 to \$20,000.....	8	30	7.7	72,704	1.0
DENISON.....	30	954	100.0	2,008,788	100.0	\$20,000 to \$100,000.....	12	158	40.6	477,160	6.8
Less than \$5,000.....	10	10	1.0	23,940	1.2	\$100,000 and over.....	7	188	48.3	6,454,182	91.8
\$5,000 to \$20,000.....	10	32	3.4	98,794	4.8	TEMPLE.....	37	342	100.0	1,451,925	100.0
\$20,000 to \$100,000.....	6	0	0.0	254,449	12.3	Less than \$5,000.....	12	14	4.1	41,018	2.8
\$100,000 to \$1,000,000.....	4	851	89.2	1,691,605	81.8	\$5,000 to \$20,000.....	12	42	12.3	106,751	7.4
EL PASO.....	117	2,347	100.0	6,135,214	100.0	\$20,000 to \$100,000.....	10	112	32.7	470,610	32.4
Less than \$5,000.....	19	23	1.0	42,006	0.7	\$100,000 to \$1,000,000.....	3	174	50.9	833,546	57.4
\$5,000 to \$20,000.....	48	209	8.9	630,429	8.0	TEXARKANA.....	20	955	100.0	1,904,009	100.0
\$20,000 to \$100,000.....	36	568	24.2	1,408,616	23.0	Less than \$5,000.....	4	12	1.3	12,155	0.6
\$100,000 to \$1,000,000.....	14	1,647	65.9	4,154,263	67.7	\$5,000 to \$20,000.....	12	85	8.9	143,018	7.2
FORT WORTH.....	180	2,308	100.0	9,973,882	100.0	\$20,000 to \$100,000.....	0	160	16.8	265,671	13.3
Less than \$5,000.....	49	54	2.3	142,128	1.4	\$100,000 to \$1,000,000.....	7	698	73.1	1,572,665	78.9
\$5,000 to \$20,000.....	57	221	9.6	637,960	6.4	TYLER.....	20	506	100.0	896,640	100.0
\$20,000 to \$100,000.....	55	599	26.0	2,164,290	21.7	Less than \$5,000.....	6	9	1.8	16,622	1.9
\$100,000 and over.....	19	1,434	62.1	7,029,493	70.5	\$5,000 to \$20,000.....	7	29	5.7	74,767	8.3
GALVESTON.....	116	1,410	100.0	8,691,960	100.0	\$20,000 and over.....	7	468	92.5	805,160	89.8
Less than \$5,000.....	25	10	1.3	64,662	0.7	WACO.....	125	1,125	100.0	5,611,737	100.0
\$5,000 to \$20,000.....	48	213	15.1	518,120	6.0	Less than \$5,000.....	39	33	2.9	75,468	1.3
\$20,000 to \$100,000.....	23	383	27.2	1,213,530	14.0	\$5,000 to \$20,000.....	38	140	13.0	398,208	7.1
\$100,000 and over.....	15	795	56.4	6,895,948	79.3	\$20,000 to \$100,000.....	32	440	39.1	1,348,412	24.0
HOUSTON.....	276	5,007	100.0	25,868,010	100.0	\$100,000 to \$1,000,000.....	16	506	45.0	3,791,949	67.6
Less than \$5,000.....	66	59	1.1	161,450	0.6	WICHITA FALLS.....	31	377	100.0	2,572,785	100.0
\$5,000 to \$20,000.....	92	363	6.5	945,151	3.7	Less than \$20,000.....	18	56	14.9	186,940	7.2
\$20,000 to \$100,000.....	72	974	17.4	3,068,802	11.9	\$20,000 and over.....	13	321	85.1	2,386,445	92.8
\$100,000 to \$1,000,000.....	39	2,039	36.4	10,005,271	38.7						
\$1,000,000 and over.....	7	2,172	38.7	11,687,327	45.2						

\* Includes the groups "\$100,000 to \$1,000,000."

\* Includes the groups "\$20,000 to \$100,000."

\* Includes the groups "\$100,000 and to \$1,000,000" and "\$1,000,000 and over."

\* Includes the group "\$1,000,000 and over."

\* Includes the group "less than \$5,000."

In most of the cities the same general condition prevails as in the state as a whole, namely, the preponderance as to the number of wage earners, value of products, and value added by manufacture for establishments having products valued at \$100,000 and over. The highest percentages of total value of products reported by establishments of this class, 91.8, 84.5, 83.9, and 81.8 per cent, appear for Sherman, Marshall, Houston, and Denison, respectively;

and the lowest, 56.3, for Austin, and 57.4, for Temple.

Table 18 shows the size of establishments in 1914 as measured by the number of wage earners employed. The figures given are for all industries combined, for 24 of the more important industries, and for each of the 24 cities having more than 10,000 inhabitants.

Table 19 presents, for 1914, percentages based on the figures in Table 18, together with similar percentages for 1909 for the industries.

Table 18

INDUSTRY AND CITY.	TOTAL.		ESTABLISHMENTS EMPLOYING—																	
			No wage earners.		1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.		51 to 100 wage earners.		101 to 250 wage earners.		251 to 500 wage earners.		501 to 1,000 wage earners.		Over 1,000 wage earners.	
	Establishments.	Wage earners (average number).	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.		
All industries.....	5,084	74,853	668	2,872	6,685	978	10,817	312	9,789	112	8,141	96	15,604	27	8,502	15	10,322	4	4,993	
Bread and other bakery products.....	530	1,940	110	358	747	55	571	5	137	5	350	1	142	1	352					
Brick, tile, pottery, and other clay products.	81	1,811	1	21	67	27	341	25	757			2	296							
Cars and general shop construction and repairs by steam-railroad companies.....	63	10,915		2	7	9	127	13	400	11	823	14	2,244	8	2,480	5	3,494	1	1,340	
Cars and general shop construction and repairs by electric-railroad companies.....	19	583		8	23	4	42	3	113	3	239	1	166							
Cement.....	4	583								1	92	3	491							
Clothing, men's.....	18	1,032		1	8			10	303	4	289	3	407							
Confectionery.....	46	773	5	20	56	11	121	5	189	4	306	1	101							
Copper, tin, and sheet-iron work.....	247	728	23	193	414	30	291	1	23											
Cotton goods.....	12	1,875								3	250	8	1,334	1	291					
Flour-mill and grist-mill products.....	191	1,300	26	108	225	41	465	13	429	3	181									
Foundry and machine-shop products.....	177	3,036	11	91	234	42	432	16	437	10	719	6	937	1	277					
Furniture and refrigerators.....	30	595	4	10	26	8	87	4	176	4	306									
Gas, illuminating and heating.....	27	613		13	41	10	111			2	124	2	337							
Ice, manufactured.....	255	1,928	1	162	471	72	801	19	579	1	75									
Leather goods.....	87	640	11	63	145	6	75	2	54	5	366									
Liquors, malt.....	13	958		3	11	2	24	1	50	3	196	3	423	1	254					
Lumber and timber products.....	587	19,956	14	292	839	170	1,810	34	1,116	23	1,672	34	6,097	13	4,094	7	4,328			
Marble and stone work.....	135	464	13	98	226	22	187	2	51											
Oil, cottonseed, and cake.....	233	4,471		18	61	144	1,893	62	1,850	8	539	1	128							
Printing and publishing.....	1,188	4,690	290	724	1,548	121	1,184	33	996	8	574	3	388							
Rice, cleaning and polishing.....	16	345				9	140	7	205											
Slaughter and meat packing.....	21	3,491		7	16	7	113	1	22	2	188	1	201	1	354			2	2,647	
Turpentine and rosin.....	6	800						3	123			2	286		400					
Wood preserving.....	6	350				1	10	4	148			1	192							
All other industries.....	1,092	10,930	150	680	1,525	187	1,092	49	1,571	12	902	10	1,434			3	2,500	1	1,006	
Total for cities.....	2,071	31,789	232	1,029	2,735	509	5,585	185	5,802	64	4,639	40	5,929	7	2,260	5	3,494	1	1,339	
ABILENE.....	18	107	3	11	37	2	22	2	48											
AMARILLO.....	36	311	1	27	67	7	69			1	69	1	175							
AUSTIN.....	114	891	20	95	138	16	169	11	349				166							
BEAUMONT.....	67	1,073	5	24	65	22	269	13	396	2	163	1	175							
BROWNSVILLE.....	14	76	1	10	25	2	26	1	25											
CEBURNE.....	26	886	3	15	42	6	67	1	26							1	751			
DALLAS.....	412	5,284	63	198	484	90	1,041	29	792	17	1,241	8	1,374	1	352					
DENISON.....	30	954	2	18	36	7	74	2	64							1	780			
EL PASO.....	117	2,347	8	56	179	35	414	11	378	3	214	2	306	1	276	1	590			
FORT WORTH.....	180	2,308	19	91	243	51	553	10	364	3	231	5	611	1	306					
GALVESTON.....	116	1,410	12	57	165	31	315	8	258	8	553	1	119							
HOUSTON.....	276	5,607	33	128	352	67	734	25	759	14	1,043	7	1,026	1	354			1	1,339	
LAREDO.....	28	270	2	12	30	10	92	3	84	1	64									
MARSHALL.....	28	1,166	3	13	32	7	80	3	94			1	108			1	852			
PALESTINE.....	20	648	1	8	14	10	103									1	531			
PARIS.....	42	513	3	21	50	10	108	7	247			1	108							
SAN ANGELO.....	30	161	4	18	34	6	59	2	68											
SAN ANTONIO.....	239	4,083	19	115	333	62	646	24	750	11	794	6	926	2	634					
SHERMAN.....	36	389	3	16	48	11	131	6	210											
TEMPLE.....	37	342	2	26	67	4	52	4	109			1	114							
TEXARKANA.....	29	955		13	45	5	51	6	200	1	57	4	602							
TYLER.....	20	506	2	11	34	4	64	2	64					1	344					
WACO.....	125	1,125	23	57	157	30	350	12	413	3	205									
WICHITA FALLS.....	31	377		10	58	8	96	3	104			1	119							

Considering the total for all industries, there were 668 establishments in operation during 1914 in which no wage earners were employed. These are small establishments in which the work is done by the proprietors or firm members. In some cases they employ a few wage earners for short periods, but the number is

so small and the period so short that, in computing the average number as described in the "Explanation of terms," no wage earners could be shown for the establishment. Printing and publishing and bread and bakery products are the industries in which the largest number of these small establishments were reported.

The comparatively small establishments still predominate in the majority of the industries of the state. Of the 5,084 establishments reported for all industries, 4,518, or 88.9 per cent, employed on the average 20 or less wage earners during the year. On the other hand, while the small establishments predominate in number, they gave employment to only 17,502 wage earners, or 25.4 per cent of the total in all establishments. There were only 142 establishments in the state that reported the employment of more than 100 wage earners each, but these establishments gave employment to 39,421, or 52.7 per cent of the total average number of wage earners reported. These large establishments are shown especially for steam-railroad repair shops, lumber and timber mills, petroleum refining, and slaughtering and meat packing.

The total for the 24 cities for all industries combined shows the same conditions generally as shown in the state as a whole—85.4 per cent of the establishments employed not more than 20 wage earners, and these wage earners constituted but 26.2 per cent of the total number. Cleburne, Marshall, Palestine, and Denison reported the largest percentage, more than 80 per cent, of the wage earners in establishments employing more than 100, but these are practically all employees in railroad-repair shops in these towns. The largest cities, with the percentage showing the proportion of wage earners in establishments employing more than 50 wage earners, are as follows: San Antonio, 57.6 per cent; Dallas, 56.2 per cent; Houston, 67.1 per cent; and Fort Worth, 49.8 per cent.

Table 19

INDUSTRY AND CITY.	Cen- sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
All industries.....	1914 1909	8.9 8.3	14.5 17.1	13.1 13.0	10.0 12.2	20.8 23.0	11.4 11.7	13.8 7.0	0.7 5.9
Bread and other bakery products.	1914 1909	38.3 37.0	20.3 25.2	7.0 7.6	.....	7.3 7.5	18.1 22.1	.....	.....
Brick, tile, pottery, and other clay products.	1914 1909	3.7 3.0	18.8 21.9	41.8 48.9	10.3 9.1	15.3 17.1	.....	.....	.....
Cars and general shop construction and repairs by steam-railroad companies.	1914 1909	0.1 0.1	1.2 1.4	3.7 2.3	7.5 8.9	20.6 24.3	22.7 25.0	32.0 20.4	12.3 10.7
Cars and general shop construction and repairs by electric-railroad companies.	1914 1909	3.9 7.0	7.2 42.2	19.4 50.9	41.0 .....	28.5 .....	.....	.....	.....
Coment.....	1914 1909	.....	.....	10.5	16.8 25.1	84.2 64.4	.....	.....	.....
Clothing, men's.....	1914 1909	0.3 0.3	..... 9.0	34.2 48.0	27.2 28.2	38.3 14.5	.....	.....	.....
Confectionery.....	1914 1909	7.2 8.6	15.7 17.2	24.5 10.5	39.6 25.8	13.1 31.9	.....	.....	.....
Copper, tin, and sheet-iron work	1914 1909	50.0 34.1	40.0 58.8	3.2 7.1	.....	.....	.....	.....	.....
Cotton goods.....	1914 1909	.....	1.3	.....	13.3 31.0	71.2 60.9	15.5	.....	.....
Flour-mill and gristmill products.	1914 1909	17.3 25.4	35.8 34.0	33.0 34.0	13.0 5.3	.....	.....	.....	.....
Foundry and machine-shop products.	1914 1909	7.7 5.0	14.2 15.3	14.4 17.2	23.7 15.0	30.9 27.1	9.1 19.1	.....	.....
Furniture and refrigerators.....	1914 1909	4.4 3.4	14.0 7.8	20.6 12.7	51.4 45.4	.....	.....	.....	.....
Gas, illuminating and heating..	1914 1909	6.7 5.0	18.1 11.7	.....	20.2 35.8	55.0 27.0	.....	.....	.....
Ice, manufactured.....	1914 1909	24.4 21.0	41.0 45.4	30.1 32.8	3.0	.....	.....	.....	.....
Leather goods.....	1914 1909	22.7 17.6	11.7 15.4	8.4 25.0	57.2 42.0	.....	.....	.....	.....
Liquors, malt.....	1914 1909	1.1 1.3	2.5 2.1	5.2 3.1	20.5 41.0	44.2 52.4	20.5	.....	.....
Lumber and timber products...	1914 1909	4.2 3.9	9.1 14.7	5.6 10.7	8.4 10.8	30.0 34.8	20.5 15.4	21.7 9.8	.....

**Engines and power.**—Table 20 shows, for 1914, 1909, and 1904, for all industries combined, the number and horsepower of engines or motors employed in generating power (including electric motors operated by purchased current). It also shows separately the number and horsepower of electric motors operated by current generated in the establishments reporting.

INDUSTRY AND CITY.	Cen- sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
Marble and stone work.....	1914 1909	48.7 33.2	40.3 51.0	11.0 15.2	.....	.....	.....	.....	.....
Oil, cottonseed, and cake.....	1914 1909	1.4 2.7	42.3 51.2	41.4 32.3	12.1 10.4	2.9 3.4	.....	.....	.....
Printing and publishing.....	1914 1909	33.0 30.1	25.2 25.1	21.2 14.5	12.2 11.2	8.3 13.0	.....	.....	.....
Rice, cleaning and polishing....	1914 1909	.....	40.0 30.2	50.4 55.8	.....	.....	.....	.....	.....
Slaughtering and meat packing.	1914 1909	0.5 0.1	3.2 0.7	0.6 2.6	4.0 2.1	5.8 9.8	10.1	75.8	84.0
Turpentine and rosin.....	1914 1909	.....	.....	15.2 5.9	.....	35.4 48.4	49.4	.....	.....
Wood preserving.....	1914 1909	.....	2.9 12.2	42.3 9.4	.....	54.9 57.1	.....	.....	.....
All other industries.....	1914 1909	14.0 15.4	18.2 24.4	14.4 14.4	8.3 14.8	13.1 15.3	22.0 15.7	9.2	.....
Total for cities.....	1914	8.6	17.6	18.3	14.6	18.7	7.1	11.0	4.2
ABILENE.....	1914	34.6	20.6	44.9	.....	.....	.....	.....	.....
AMARILLO.....	1914	21.5	22.2	.....	50.3	.....	.....	.....	.....
AUSTIN.....	1914	15.5	19.0	39.2	7.7	18.0	.....	.....	.....
BEAUMONT.....	1914	6.1	25.1	36.9	15.7	16.3	.....	.....	.....
BROWNSVILLE.....	1914	.....	.....	.....	.....	.....	.....	.....	.....
CLEBURNE.....	1914	4.7	7.6	2.9	.....	.....	.....	84.8	.....
DALLAS.....	1914	9.2	19.7	15.0	23.5	26.0	6.7	.....	.....
DENISON.....	1914	3.8	7.8	6.7	.....	.....	.....	81.8	.....
EL PASO.....	1914	7.6	17.6	16.1	9.1	13.0	11.8	24.7	.....
FORT WORTH.....	1914	10.5	24.0	15.8	10.0	20.5	13.3	.....	.....
GALVESTON.....	1914	11.7	22.3	18.3	39.2	8.4	.....	.....	.....
HOUSTON.....	1914	6.3	13.1	13.5	18.6	18.3	6.3	.....	23.9
LAREDO.....	1914	11.1	34.1	31.1	23.7	.....	.....	.....	.....
MARSHALL.....	1914	2.7	6.9	8.1	.....	9.3	.....	73.1	.....
PALESTINE.....	1914	2.2	15.9	.....	.....	.....	.....	81.9	.....
PARIS.....	1914	9.7	21.1	48.1	.....	21.1	.....	.....	.....
SAN ANGELO.....	1914	21.1	36.6	42.2	.....	.....	.....	.....	.....
SAN ANTONIO.....	1914	8.2	15.8	18.4	19.4	22.7	15.5	.....	.....
SHERMAN.....	1914	12.3	33.7	54.0	.....	.....	.....	.....	.....
TEMPLE.....	1914	10.6	15.2	31.8	.....	33.3	.....	.....	.....
TEXARKANA.....	1914	4.7	5.3	20.9	6.0	63.0	.....	.....	.....
TYLER.....	1914	6.7	12.0	12.6	.....	.....	68.0	.....	.....
WACO.....	1914	14.0	31.1	33.7	18.2	.....	.....	.....	.....
WICHITA FALLS.....	1914	15.4	25.5	27.0	.....	31.0	.....	.....	.....

This table shows, for the decade 1904-1914, an increase in primary power of 104 per cent; steam power, 68.1 per cent; internal-combustion engines, 1,408.5 per cent; rented electric power, 872.9 per cent; and electric power generated by establishments reporting, 464 per cent. The proportion which steam power formed of the total primary power has steadily

decreased, from 94.7 per cent in 1904 to 88.3 per cent in 1909 and 78.1 per cent in 1914. Rented electric power (which now represents practically all the

rented power) constituted only 2.7 per cent of the total primary power in 1904, but in 1914 its proportion of the total had increased to 12.8 per cent.

Table 20

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904
Primary power, total.....	8,947	6,232	2,408	335,701	282,471	164,637	100.0	100.0	100.0
Owned.....	3,672	3,789	2,408	292,553	267,167	160,164	87.1	94.6	97.3
Steam engines and turbines.....	2,541	2,955	1,973	262,200	249,535	156,011	78.1	88.3	94.7
Internal-combustion engines.....	1,101	802	403	28,300	16,745	1,876	8.4	5.6	1.1
Water wheels, turbines, and motors.....	30	32	32	2,053	1,887	2,277	0.6	0.7	1.4
Rented.....	5,275	2,443	( <sup>2</sup> )	43,238	15,304	4,473	12.9	5.4	2.7
Electric.....	5,275	2,443	( <sup>2</sup> )	42,943	14,868	4,414	12.8	5.3	2.7
Other.....				295	436	59	0.1	0.2	( <sup>3</sup> )
Electric.....	7,313	3,454	( <sup>2</sup> )	76,133	36,450	10,299	100.0	100.0	100.0
Rented.....	5,275	2,443	( <sup>2</sup> )	42,943	14,868	4,414	56.4	40.8	42.9
Generated by establishments reporting.....	2,038	1,011	410	33,190	21,582	5,885	43.6	59.2	57.1

<sup>1</sup> Figures for horsepower include for 1909 and 1904 the amounts reported under the head of "other" owned power.

<sup>2</sup> Not reported.

<sup>3</sup> Less than one-tenth of 1 per cent.

**Fuel.**—Closely related to the subject of power employed in manufactures is that of the fuel consumed in generating this power or otherwise used in the manufacturing processes. Table 21 shows, for 1914, the

quantity of each kind of fuel used, for which data were obtained, for all industries combined and for selected industries in the state as a whole, and for all industries combined in each city.

Table 21

INDUSTRY AND CITY.	COAL.		Coke (tons, 2,000 lbs.).	Oil, including gasoline (barrels).	Gas (1,000 cubic feet).
	An-thra-cite (tons, 2,240 lbs.).	Bitu-minous (tons, 2,000 lbs.).			
All industries.....	8,800	1,286,179	83,632	5,500,905	6,040,046
Bread and other bakery products.....	168	2,637	1,207	11,327	624,065
Brick, tile, pottery, and other clay products.....		57,358	100	356,072	158,328
Cars and general shop construction and repairs by steam-rail-road companies.....	135	66,052	321	425,056	193,775
Cement.....		71,785		414,006	357,000
Cotton goods.....		37,420		14,674	70
Flour-mill and gristmill products.....		62,944	748	47,092	168,093
Foundry and machine-shop products.....	104	10,186	7,661	25,621	72,670
Gas, illuminating and heating.....	2,021	15,983	21,136	142,051	170,912
Ice, manufactured.....	1,660	240,747	2,622	412,171	2,608,566
Liquors, malt.....		24,525		204,189	986
Lumber and timber products.....	880	27,562	480	35,390	5,806
Oil, cottonseed, and cake.....	870	310,173		139,079	720,628
Petroleum, refining.....		11,632	10,701	2,437,135	
Printing and publishing.....	244	2,064	30	3,374	75,876
Rice, cleaning and polishing.....				28,020	
Slaughtering and meat packing.....		62,716		409,793	77,667
Wood preserving.....		1,895		40,680	64,910
All other industries.....	2,718	279,595	39,236	461,255	740,126

INDUSTRY AND CITY.	COAL.		Coke (tons, 2,000 lbs.).	Oil, including gasoline (barrels).	Gas (1,000 cubic feet).
	An-thra-cite (tons, 2,240 lbs.).	Bitu-minous (tons, 2,000 lbs.).			
Total for cities.....	5,143	346,684	33,705	1,141,401	4,631,460
ABILENE.....		1,813		1,546	20,188
AMARILLO.....		11,621		10,621	968
AUSTIN.....	66	39,243	2,038	14,223	7,949
BEAUMONT.....	38	675	1,775	43,633	2,475
BROWNSVILLE.....		4		10,021	
CLEBURNE.....		8,716	426	66,913	120
DALLAS.....	486	36,830	2,360	85,897	1,642,428
DENISON.....	30	7,892	26	90	70,759
EL PASO.....	5	28,414	1,304	66,380	5,508
FORT WORTH.....	1,595	14,760	1,565	156,372	446,580
GALVESTON.....	1,005	881	351	114,516	4,790
HOUSTON.....	205	40,470	0,488	270,115	6,682
LAREDO.....		3,770	2,382	26	10,912
MARSHALL.....	6	2,352	1,803	3,184	776,397
PALESTINE.....	3	4,260	266	50,305	1,629
PARIS.....		14,335	404	1,594	2,729
SAN ANGELO.....		2,288	110	15,182	325
SAN ANTONIO.....	448	56,211	5,726	152,683	18,960
SHERMAN.....	6	15,337	595	7,539	54,174
TEMPLE.....		11,012	547	35,723	444
TEXARKANA.....	50	1,563	46	27,396	491,245
TYLER.....		9,075		38	72
WACO.....	291	34,235	1,651	7,349	660
WICHITA FALLS.....		12	242	155	1,059,466

## SPECIAL STATISTICS.

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and cost of materials, the quantity and value of products, and other information for securing which no provision is made on the general schedule. Certain data of this character for six important industries in Texas are here presented, and also the statistics for power laundries.

**Slaughtering and meat packing.**—This industry,

which is one of the youngest in the state, shows remarkable development during the decade 1904-1914. As late as the census of 1889 there were no wholesale slaughtering and meat-packing establishments reported for the state. Texas has long been a great stock-raising state.

The following table gives the quantity and cost of the principal materials used and the quantity and value of the various products for 1914, 1909, and 1904.

Table 22	1914	1909	1904
<b>MATERIALS.</b>			
Total cost.....	\$44,424,417	\$37,400,785	\$13,593,181
<b>Animals slaughtered:</b>			
Beef—			
Number.....	554,470	527,469	285,205
Cost.....	\$24,219,588	\$15,089,886	\$9,051,742
Calves—			
Number.....	145,391	234,172	94,093
Cost.....	\$2,151,433	\$2,074,188	\$903,625
Sheep and lambs—			
Number.....	284,050	77,805	49,831
Cost.....	\$1,100,295	\$315,690	\$165,281
Hogs—			
Number.....	570,182	930,674	347,049
Cost.....	\$8,812,534	\$10,033,088	\$3,218,450
Dressed meat purchased for curing, cost.....	\$553,740	\$1,110,042	\$460,107
All other materials, cost.....	\$7,490,827	\$7,880,885	\$2,893,070
<b>PRODUCTS.</b>			
Total value.....	\$52,045,022	\$42,520,746	\$15,620,031
<b>Fresh meat:</b>			
Beef—			
Pounds.....	206,657,023	208,080,588	105,088,208
Value.....	\$19,558,100	\$12,408,125	\$4,054,013
Veal—			
Pounds.....	10,080,516	29,308,086	0,674,700
Value.....	\$1,000,907	\$2,023,883	\$598,038
Mutton and lamb—			
Pounds.....	11,170,234	2,840,112	1,070,045
Value.....	\$1,080,533	\$260,574	\$127,578
Pork—			
Pounds.....	23,767,781	32,054,404	0,590,282
Value.....	\$2,817,212	\$3,105,000	\$713,549
Edible offal and other fresh meat—			
Pounds.....	7,571,175	2,052,042	0,523,500
Value.....	\$592,737	\$254,877	\$380,941
<b>Cured meat:</b>			
Beef, pickled and other cured—			
Pounds.....	2,270,190	1,483,166	2,020,874
Value.....	\$324,185	\$115,810	\$144,727
Pork, pickled and other cured—			
Pounds.....	30,477,022	71,210,957	20,250,012
Value.....	\$9,180,003	\$7,048,403	\$2,406,940
Sausage—			
Pounds.....	8,847,610	12,010,425	8,407,017
Value.....	\$970,923	\$1,004,242	\$430,890
Canned goods—			
Pounds.....	3,745,697	( <sup>1</sup> )	( <sup>1</sup> )
Value.....	\$601,189	( <sup>1</sup> )	\$58,518
Lard—			
Pounds.....	10,157,440	60,862,080	38,077,525
Value.....	\$1,790,814	\$5,644,140	\$2,748,000
Lard compounds and substitutes—			
Pounds.....	72,345,830	( <sup>2</sup> )	( <sup>2</sup> )
Value.....	\$0,200,084	( <sup>2</sup> )	( <sup>2</sup> )
Tallow, oleo stock, and stearin—			
Pounds.....	0,070,735	2,251,373	( <sup>3</sup> )
Value.....	\$363,572	\$179,701	( <sup>3</sup> )
Sausage casings—			
Pounds.....	4,064,966	( <sup>4</sup> )	( <sup>4</sup> )
Value.....	\$890,911	( <sup>4</sup> )	( <sup>4</sup> )
Fertilizers and fertilizer materials—			
Tons.....	13,037	15,303	5,565
Value.....	\$324,236	\$435,004	\$141,208
<b>Hides and pelts:</b>			
Cattle—			
Number.....	554,470		
Pounds.....	27,412,468		
Value.....	\$4,632,086	608,452	304,806
Calf—			
Number.....	110,110	27,478,301	17,700,494
Pounds.....	2,044,810	\$3,750,410	\$1,565,481
Value.....	\$360,904		
Sheep—			
Number.....	283,471	77,861	49,831
Value.....	\$169,750	\$54,020	\$31,315
All other products, value.....	\$4,534,451	\$5,404,858	\$1,311,804

<sup>1</sup> Excludes data for one establishment, to avoid disclosing the operations of individual establishments.

<sup>2</sup> Includes cost of "all other animals," to avoid disclosing the operations of individual establishments.

<sup>3</sup> Figures not shown, to avoid disclosing the operations of individual establishments.

<sup>4</sup> Not reported separately, except for canned beef, which was 208,180 pounds, valued at \$12,400.

<sup>5</sup> Not reported separately.

<sup>6</sup> No stearin manufactured in 1914.

There were 269,184, or 94.4 per cent, more beeves slaughtered in 1914 than in 1904; 51,298, or 54.5 per cent, more calves; 234,219, or 470 per cent, more sheep and lambs; and 223,142, or 64.3 per cent, more hogs. In each case, however, the increase in cost was relatively much greater than the increase in number.

Large increases are shown from 1904 to 1914 in both quantity and value of all classes of products except edible offal and lard. Edible offal shows a decrease of 20.5 per cent in quantity but an increase of 45.1 per cent in value. Lard shows a decrease of 22,820,085 pounds, or 58.5 per cent, due largely to the increased manufacture of lard compounds and substitutes. The growth of the industry from 1909 to 1914 is much less marked than from 1904 to 1909.

Oil, cottonseed, and cake.—Texas, which ranks first among the states in the growing of cotton, also ranks first in the manufacture of cottonseed products. The following table gives the quantity of cotton seed used for oil extraction and the quantities of the several crude products obtained for the census years 1914, 1909, 1904, and 1899:

Table 23 MATERIAL AND PRODUCT.	QUANTITY.			
	1914	1909	1904	1899
Cotton seed crushed.....tons..	1,191,508	910,374	864,787	692,604
Crude products manufactured:				
Oil, gallons.....	41,849,003	33,497,933	32,230,640	24,354,695
Meal and cake, tons (2,000 lbs.)	538,752	395,701	340,700	252,983
Hulls, tons (2,000 lbs.).....	367,090	340,528	337,233	328,119
Linters, pounds.....	92,970,687	46,994,462	33,307,400	15,544,379

The 1914 statistics for this industry relate to the crushing season of 1913-14, that is, to the handling of seed from the crop of 1913. The data above cover the operations of all establishments which crushed cotton seed during the season, regardless of the extent to which they were engaged in other branches of industry. Furthermore, the crude products reported represent the total production derived from crushing cotton seed, whether sold as such or used as intermediate products in further processes of manufacture, such as the refining of oil and the mixing of fertilizer and feed.

Texas produced 27.9 per cent of the American cotton crop of 1913, reported 24.6 per cent of the total quantity of cotton seed used in the manufacture of cottonseed products, and contributed 21.4 per cent of the total production of oil. While the percentage of the oil production is considerably lower than the percentage of the seed furnished, it is due to the fact that the oil content of the seed grown in Texas is considerably lower than that of seed grown in Georgia and the Carolinas. This lower proportion of oil production is also affected to some extent by the installation of cold-process machinery, which expresses the oil without hulling the seed, thus lowering the recovery of the oil content of the seed.

The total quantity of cotton seed crushed increased from 692,604 tons in 1899 to 1,191,508 tons in 1914, or 72.2 per cent. The quantities of the various products obtained in 1914 per ton of seed, as received at the mill, were as follows: Crude oil, 34.7 gallons; cake and meal, 904 pounds; hulls, 616 pounds; and linters, 78 pounds.

**Flour-mill and gristmill products.**—The following table shows the quantity and value of the different classes of products for 1914, 1909, and 1904.

Table 24	1914	1909	1904
Products, total value.....	\$35,110,301	\$32,434,612	\$22,083,136
Wheat flour:			
Barrels.....	4,089,378	3,342,035	3,228,290
Value.....	\$21,805,023	\$19,124,834	\$16,491,820
Rye flour:			
Barrels.....	813	1,551	540
Value.....	\$4,117	\$9,069	\$2,660
Corn meal and corn flour:			
Barrels.....	1,042,654	877,314	599,375
Value.....	\$3,729,947	\$2,875,994	\$1,477,014
Hominy and grits:			
Pounds.....	2,000	198,000	128,000
Value.....	\$40	\$3,520	\$1,920
Bran and middlings:			
Tons.....	167,091	( <sup>1</sup> )	( <sup>1</sup> )
Value.....	\$4,203,501		
Feed and offal:			
Tons.....	171,510	400,290	200,873
Value.....	\$5,225,761	\$10,429,925	\$4,075,708
All other cereal products, value.....	\$745	\$14,872	
All other products, value.....	\$140,507	\$26,398	\$33,014

<sup>1</sup> Included in "feed and offal."

From 1909 to 1914 the output of wheat flour increased by 747,343 barrels, or 22.4 per cent, and 14 per cent in value. Corn meal and corn flour increased 165,340 barrels, or 18.8 per cent, and 29.7 per cent in value. Decreases are shown for rye flour, hominy and grits, and feed and offal. In 1914 wheat flour represented 62.1 per cent of the total value of products; corn meal and corn flour, 10.6 per cent; bran and middlings, 12 per cent; and feed and offal, 14.9 per cent.

Of the 90 establishments that ground wheat in 1914, 11 reported an annual production of over 100,000 barrels of wheat flour each; 32 from 20,000 to 100,000 barrels each; 16 from 5,000 to 20,000 barrels each; 21 from 1,000 to 5,000 barrels each; and 10 less than 1,000 barrels each.

The equipment reported in 1914 consisted of 1,015 stands of rolls, 103 runs of stone, and 80 attrition mills. Nine establishments manufactured barrels and 10 manufactured sacks.

**Printing and publishing.**—The number and aggregate circulation per issue of the various publications in Texas, as reported at the censuses of 1914, 1909, and 1904, are shown in Table 25.

Table 25	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
PERIOD OF ISSUE.	1914	1909	1904	1914	1909	1904
Total.....	1,005	962	817	2,833,082	2,180,922	1,762,092
Daily.....	107	99	87	610,445	330,562	245,370
Sunday.....	32	30	20	461,948	302,189	223,159
Semiweekly.....	29	128	18	221,852	265,816	227,009
Weekly.....	702	728	620	1,125,370	964,524	834,434
Monthly.....	65	64	54	375,035	256,700	211,929
All other classes.....	10	13	0	38,420	61,131	19,900

<sup>1</sup> Includes one triweekly publication.

The increases during the 10-year period 1904-1914 both in total number and aggregate circulation of publications are notable—188, or 23 per cent, in

number, and 1,070,390, or 60.7 per cent, in circulation. The increases for the five-year period 1909-1914 were 43 in number and 652,160, or 29.9 per cent, in circulation.

From 1909 to 1914 the circulation of the daily newspapers increased 279,883, or 84.7 per cent. Of these dailies, 72 were evening editions, with a circulation of 344,146. The increase in the circulation of the Sunday newspapers for this later semidecade was 159,759, or 52.9 per cent; of the weeklies, 160,852, or 16.7 per cent; and of the monthly publications, 118,335, or 46.1 per cent. The circulation of the semi-weeklies decreased 43,964, or 16.5 per cent, during the same period. Of the 10 publications in "all other classes" in 1914, 7 were issued monthly and 1 each bimonthly, quarterly, and semiannually.

Most of the publications were printed in English, but there were 25 German, including 1 German and English; 20 Spanish; 9 Bohemian, including 2 Bohemian and English; 3 Italian; and 1 Swedish. Of these foreign or foreign and English publications, 8 were dailies, with an average circulation of 29,200; 40 were weeklies, with an average circulation of 93,195; and 5 were semiweeklies with an average circulation of 12,118.

**Rice, cleaning and polishing.**—Rice mills, as a rule, depend on the local supply, and are usually located in the immediate vicinity in which the rice is grown. As a result of the introduction of rice culture in this state there was a rapid increase in the number of rice mills. In 1899 there was only 1 mill in the state engaged in the milling of rice; in 1904, 17; in 1909, 19; and in 1914, 16 active establishments. There has been a tendency at some points to have one mill perform the work formerly done by several mills, thus accounting for the decrease in the number of active mills. The following statement shows the quantity of rough rice treated and the quantity of products, by kind, for the census years 1914, 1909, and 1904:

Table 26	QUANTITY (POUNDS).		
MATERIAL AND PRODUCT.	1914	1909	1904
Rough rice treated.....	315,160,065	371,816,370	316,170,405
Products manufactured:			
Clean rice.....	206,724,899	236,117,295	197,433,320
Polish.....	9,856,739	10,402,638	9,500,830
Bran.....	29,251,625	29,505,946	40,772,421

The statistics in this table for 1914 in most instances relate to the milling season of 1913-14—that is, to the handling of rice from the crop of 1913—and cover the operations of all establishments engaged primarily in the milling of rice. Some establishments are employed in the milling of rice on a custom basis, the quantities so treated being included in the table.

The total quantity of rough rice milled—that is, rice as it leaves the thrasher—was 315,169,065 pounds in 1914. The quantity is slightly less than in 1904 and a considerable reduction from the quantity milled



in 1909. The quantity of clean rice obtained was 206,724,899 pounds in 1914, exceeding the quantity obtained in 1904 by 9,291,579 pounds, thus showing a greater proportion of clean rice obtained in the later year. For the season 1913-14, 203,332,545 pounds of rough rice were of the Honduras type, 111,656,520 pounds of the Japan type, and 180,000 pounds of other types. The change in the variety of rice grown and improvements in method of treatment account, at least in part, for the increased proportion of clean rice obtained and also of whole rice as compared with broken rice.

**Ice, manufactured.**—The quantity and value of the products of this industry, for 1914, 1909, and 1904, are given in the following table:

Table 27	1914	1909	1904
Number of establishments.....	1 255	1 182	125
<b>MATERIALS.</b>			
Ammonia, total cost.....	\$122,733	\$90,310	\$53,311
Anhydrous—			
Pounds.....	300,207	307,399	170,310
Cost.....	\$110,552	\$93,017	\$51,056
Aqua—			
Pounds.....	105,350	58,898	35,047
Cost.....	\$0,181	\$3,293	\$2,255
<b>PRODUCTS.</b>			
Total value.....	\$5,328,302	\$3,844,120	\$2,083,880
Total ice:			
Tons (2,000 lbs.).....	1,149,074	700,100	426,755
Value.....	\$4,981,332	\$3,001,068	\$2,014,702
Can—			
Tons (2,000 lbs.).....	1,147,490	703,911	425,195
Value.....	\$4,968,488	\$3,580,488	\$2,000,305
Plate—			
Tons (2,000 lbs.).....	1,584	2,255	1,560
Value.....	\$12,844	\$12,480	\$5,307
All other products, value.....	\$346,970	\$242,152	\$69,178

<sup>1</sup> In addition, in 1914, 36 establishments engaged in the manufacture of products other than ice made 239,790 tons of ice, valued at \$824,401, and in 1909, 20 similar establishments made 103,313 tons, valued at \$541,467.

Texas ranked first among the states in the manufacture of ice, \$5,328,302 being the value of the products of this industry. Of this amount, \$4,481,332 represents the value of 1,149,074 tons of ice, and \$346,970 the value of other products. In addition, 239,790 tons of ice, valued at \$824,401, were manufactured in establishments engaged primarily in some other industry. Can ice was practically the entire product and shows increases in quantity and value for each census period. The five-year period from 1904 to 1909 shows an increase of 78.6 per cent in the value of this kind of ice, and the later period, 24.5 per cent.

As shown by the table, of the total cost of ammonia used, that of anhydrous represented nearly 95 per cent, being used in 253 of the 255 establishments reporting. The compressor system was the most common, 245 of the establishments using this method of manufacture, two of which also used the absorption system. There were 345 ice machines reported, with an ice-making capacity of 8,304 tons per day of 24 hours. The storage space reported for ice was 3,098,365 cubic feet, and for general cold storage, 4,617,083 cubic feet.

**Laundries.**—Statistics for power laundries are not included in the general tables or in the totals for all manufacturing industries. Table 28, however, summarizes these statistics for Texas for 1914 and 1909.

Table 28

	POWER LAUNDRIES.		
	Number or amount.		Per cent of increase, 1909-1914.
	1914	1909	
Number of establishments.....	185	127	45.7
Persons engaged.....	5,254	3,514	49.5
Proprietors and firm members.....	221	150	47.3
Salaried employees.....	428	201	47.1
Wage earners (average number).....	4,005	3,073	49.9
Primary horsepower.....	6,063	3,195	89.8
Capital.....	\$3,443,394	\$2,000,200	71.7
Salaries and wages.....	2,003,511	1,554,999	27.4
Salaries.....	485,502	201,198	85.9
Wages.....	2,117,910	1,293,801	63.7
Paid for contract work.....	21,576	0,035	257.5
Rent and taxes.....	134,847	59,612	125.6
Cost of materials.....	1,071,022	471,421	127.3
Amount received for work done.....	5,521,841	3,220,315	71.5

In 1914 Texas ranked eighth among the states in amount received for work done and ninth in number of persons engaged in steam laundries; in 1909 it ranked tenth in value of work done and ninth in number of persons engaged. Establishments owned by individuals reported 23.8 per cent of the amount received for work done; those owned by corporations 58.1 per cent; and those under other forms of ownership, 18.1 per cent.

Table 29 shows for 1914 and 1909 the number of wage earners employed in the laundries on the 15th of each month, or the nearest representative day, and the percentage which this number represents of the greatest number reported for any month of the same year.

Table 29

MONTH.	WAGE EARNERS.			
	Number.		Per cent of maximum.	
	1914	1909	1914	1909
January.....	4,352	2,791	85.8	85.0
February.....	4,319	2,847	85.2	86.7
March.....	4,360	2,891	86.0	88.0
April.....	4,509	2,978	88.9	90.6
May.....	4,684	3,048	92.4	92.8
June.....	4,804	3,160	96.5	98.2
July.....	5,072	3,232	100.0	98.4
August.....	5,019	3,284	99.0	100.0
September.....	4,844	3,277	95.5	100.8
October.....	4,555	3,172	89.8	96.6
November.....	4,378	3,112	86.3	94.8
December.....	4,279	3,090	84.4	94.1

Table 30 shows the kinds and quantities of fuel used in the laundries, as reported at the censuses of 1914 and 1909, with percentages of increase.

Table 30

KIND.	Unit.	QUANTITY.		Per cent of increase, 1909-1914.
		1914	1909	
Anthracite coal.....	Tons (2,240 lbs.).....	1,146	4	( <sup>1</sup> )
Bituminous coal.....	Tons (2,000 lbs.).....	50,464	41,990	34.5
Coke.....	Tons (2,000 lbs.).....	53	53	( <sup>1</sup> )
Oil, including gasoline.....	Barrels.....	51,180	17,410	194.0
Gas.....	1,000 cubic feet.....	408,096	67,086	597.8
Wood.....	Cords.....	( <sup>2</sup> )	4,275	.....

<sup>1</sup> Per cent not shown where base is less than 100.

<sup>2</sup> Not called for at the census of 1914.



Table 31 gives statistics as to the kinds and amounts of power used in the laundries of the state in 1914 and 1909, together with percentages of increase for the five-year period.

Table 31	KIND.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			KIND.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.		
				Amount.		Per cent of in- crease, 1909- 1914. <sup>1</sup>				Amount.		Per cent of in- crease, 1909- 1914. <sup>1</sup>
		1914	1909	1914	1909	1914		1909				
Primary power, total.....	442	235	6,063	3,195	89.8	Primary power—Continued.						
Owned.....	222	123	5,312	2,922	81.8	Rented.....	220	112	751	273	175.1	
Steam engines and turbines.....	162	120	5,109	2,865	78.3	Electric.....	220	112	751	263	185.6	
Internal-combustion engines.....	11	3	101	57		Other.....				10		
Water wheels, turbines, and motors.....	49		102			Electric—Generated in establishments reporting.....	278	38	644	124	419.4	

<sup>1</sup> Percentages are omitted where base is less than 100.

## GENERAL TABLES.

Table 32 gives, for 1914, 1909, and 1904, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products, for selected industries in the state and in the cities having 50,000 inhabitants or more; and for the cities having from 10,000 to 50,000 inhabitants, similar data for all industries combined.

Table 33 presents, for 1914, in the state as a whole and in cities with 50,000 inhabitants or more, statistics in detail for each industry that can be shown without the disclosure of individual operations, and for the cities having from 10,000 to 50,000 inhabitants, for all industries combined.

TABLE 32.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904.

INDUSTRY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.	INDUSTRY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.								Expressed in thousands.		
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.															
All industries.....	1914	5,084	74,853	335,791	\$44,821	\$253,144	\$361,279	Coffee, roasting and grinding.	1914	36	145	619	\$83	\$2,553	\$3,326
	1909	4,588	70,230	282,471	37,907	178,170	272,896		1909	24	135	429	66	1,740	2,220
	1904	3,158	49,066	164,637	21,469	91,604	150,528		1904	4	20	59	9	202	244
Bread and other bakery products.	1914	530	1,949	2,325	1,095	4,142	7,503	Confectionery.....	1914	46	773	790	282	1,452	2,565
	1909	385	1,301	1,281	671	3,062	5,311		1909	49	717	607	218	1,459	2,451
	1904	244	851	473	395	1,752	3,049		1904	23	489	338	147	608	1,155
Brick, tile, pottery, and other clay products.	1914	81	1,811	8,866	801	934	2,378	Cooperage.....	1914	6	218	511	93	595	769
	1909	106	2,355	8,411	980	961	3,142		1909	11	243	346	98	488	719
	1904	114	1,526	3,807	561	436	4,632		1904	20	235	540	127	495	741
Brooms.....	1914	31	177	140	95	264	460	Copper, tin, and sheet-iron work.	1914	247	728	287	561	1,017	2,238
	1909	32	184	110	80	210	394		1909	168	733	211	532	1,081	2,214
	1904	28	138	45	62	142	258		1904	75	465	49	309	565	1,195
Butter.....	1914	51	174	1,300	115	1,752	2,281	Cotton goods.....	1914	12	1,875	5,948	675	2,643	3,755
	1909	36	84	477	40	530	600		1909	13	1,590	4,835	501	1,793	2,815
	1904	10	5	62	4	49	63		1904	13	993	3,452	270	1,018	1,587
Canning and preserving <sup>1</sup> .	1914	22	213	423	79	630	1,211	Fertilizers.....	1914	8	101	522	63	366	638
	1909	19	153	243	45	201	498		1909	3	9	53	3	49	57
	1904	20	119	227	23	208	332	Flour-mill and gristmill products.	1914	191	1,390	19,068	798	29,573	35,110
Carriages and wagons and materials.	1914	32	205	446	140	156	489		1909	238	1,216	20,765	660	28,657	32,485
	1909	50	412	374	267	319	830		1904	154	986	16,249	528	18,903	22,083
	1904	* 34	211	118	124	130	368	Food preparations.....	1914	26	317	1,258	136	3,332	4,052
Cars and general shop construction and repairs by electric-railroad companies.	1914	19	583	2,354	416	268	735		1909	23	284	1,322	108	4,580	5,229
	1909	14	230	529	130	120	278		1904	11	153	135	51	209	375
Cars and general shop construction and repairs by steam-railroad companies.	1914	63	10,915	13,205	7,826	5,978	15,276	Foundry and machine-shop products. <sup>4</sup>	1914	177	3,036	7,810	2,108	4,021	8,782
	1909	62	9,782	7,335	6,715	5,546	13,359		1909	143	2,925	5,287	1,925	3,859	8,068
	1904	47	8,593	3,735	5,370	4,470	10,473		1904	* 111	2,080	2,781	1,268	2,302	5,179
Cement.....	1914	4	583	18,150	371	1,264	2,331	Furniture and refrigerators.	1914	30	595	1,883	367	516	1,278
	1909	3	362	7,700	201	403	855		1909	25	701	1,879	331	765	1,512
									1904	15	294	429	147	203	401
Clothing, men's.....	1914	18	1,062	260	394	1,285	2,080	Gas, illuminating and heating.	1914	27	613	1,759	354	768	2,185
	1909	25	992	359	312	1,007	1,769		1909	27	575	1,090	288	545	1,644
	1904	* 16	690	73	179	672	1,205		1904	19	164	325	103	197	719

<sup>1</sup> Includes "canning and preserving, fruits and vegetables" and "pickles, preserves, and sauces."

<sup>2</sup> Excludes statistics for two establishments, to avoid disclosing operations of individual establishments.

<sup>3</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.

<sup>4</sup> Includes "automobile repairing," "hardware, saddlery," and "structural ironwork, not made in steel works or rolling mills."

## MANUFACTURES—TEXAS.

TABLE 32.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Primary horse- power.	Wages.			INDUSTRY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Primary horse- power.	Wages.		
					Expressed in thousands.								Expressed in thousands.		
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.															
Ice, manufactured .....	1914	255	1,926	42,271	\$1,138	\$1,060	\$5,328	Printing and publishing ..	1914	1,188	4,690	6,111	\$3,557	\$3,997	\$15,051
	1909	182	1,437	29,905	839	1,002	3,844		1909	1,067	4,408	4,392	2,785	2,807	11,587
	1904	125	809	18,468	451	673	2,084		1904	850	3,444	2,756	2,071	1,703	7,830
Leather goods <sup>1</sup> .....	1914	87	640	377	420	2,482	3,567	Rice, cleaning and polish- ing.	1914	10	345	5,365	199	6,866	7,216
	1909	67	721	601	403	2,839	4,317		1909	19	430	6,274	189	7,122	8,142
	1904	60	748	297	474	2,054	3,305		1904	17	432	4,509	212	3,508	4,640
Liquors, malt .....	1914	13	958	9,068	800	2,929	8,471	Salt .....	1914	3	140	809	75	227	425
	1909	12	705	7,817	566	1,695	4,464		1909	6	102	447	82	216	407
	1904	10	626	4,753	412	1,095	4,154		1904	7	172	497	74	195	351
Lumber and timber prod- ucts. <sup>2</sup>	1914	587	19,966	73,752	10,904	11,640	28,741	Shipbuilding, wooden, in- cluding boat building.	1914	14	168	310	123	279	474
	1909	799	23,518	88,031	11,002	11,004	32,201		1909	6	36	21	30	34	76
	1904	391	14,023	43,022	6,500	4,055	18,880		1904	8	80	7	23	16	61
Marble and stone work...	1914	135	404	1,531	358	523	1,307	Slaughtering and meat packing. <sup>3</sup>	1914	21	3,401	12,313	2,073	44,457	52,990
	1909	107	605	1,010	425	502	1,443		1909	14	3,639	11,330	1,902	37,410	42,530
	1904	63	346	580	223	300	778		1904	9	2,019	2,086	866	13,593	15,621
Mattresses and spring beds	1914	59	283	900	152	602	1,060	Tobacco, cigars and cigarettes.	1914	66	344	3	159	240	602
	1909	60	233	587	118	362	688		1909	67	339	7	141	182	509
	1904	27	311	488	124	400	697		1904	86	347	7	159	211	550
Mineral and soda waters..	1914	292	545	1,190	277	902	1,013	Turpentine and rosin.....	1914	6	809	21	207	98	608
	1909	212	400	538	185	473	1,284		1909	8	210	10	80	42	218
	1904	177	321	307	135	337	584		1904	6	350	2,950	227	2,041	3,066
Oil, cottonseed, and cake.	1914	233	4,471	60,772	2,087	36,177	41,945	Wood preserving.....	1914	6	417	1,595	215	3,315	3,859
	1909	194	3,073	45,185	1,290	23,439	20,916		1909	5	304	615	117	1,239	1,503
	1904	167	2,730	33,960	1,020	15,895	18,600		1904	5	304	615	117	1,239	1,503
Patent medicines and compounds and drug- gists' preparations. <sup>4</sup>	1914	61	116	97	52	288	740	All other industries.....	1914	415	7,784	18,070	5,146	74,127	88,237
	1909	69	145	51	62	411	1,014		1909	292	4,405	21,012	2,687	27,459	37,871
	1904	38	103	17	35	241	700		1904	180	3,620	19,344	1,896	12,632	18,492

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

DALLAS—All indus- tries.	1914	412	5,284	15,517	\$3,464	\$19,570	\$31,005	EL PASO.....	1914	117	2,347	6,778	\$1,673	\$2,873	\$6,135
	1909	305	4,832	13,808	2,004	16,960	26,950		1909	88	1,752	3,396	1,093	1,490	3,638
	1904	247	3,445	.....	1,750	9,207	15,028		1904	54	1,158	.....	710	1,131	2,378
Bread and other bakery products.	1914	35	513	917	257	987	1,939	FORT WORTH—All industries.	1914	180	2,308	7,815	1,542	5,832	9,974
	1909	21	384	483	116	894	1,496		1909	147	2,059	6,614	1,285	5,268	8,661
	1904	17	170	.....	78	451	693		1904	102	1,423	.....	843	3,180	5,668
Clothing, men's.....	1914	5	370	107	147	429	727	Bread and other bakery products.	1914	13	85	73	55	202	318
	1909	3	200	38	55	230	377		1909	17	99	101	62	181	314
	1904	3	174	.....	44	211	458		1904	8	125	.....	45	211	458
Confectionery.....	1914	7	185	187	68	362	616	Copper, tin, and sheet- iron products.	1914	12	43	8	47	81	175
	1909	5	152	273	52	280	570		1909	7	44	8	35	71	150
	1904	5	136	.....	43	213	377		1904	6	38	.....	27	52	108
Copper, tin, and sheet- iron work.	1914	20	101	98	81	229	443	Foundry and machine- shop products.	1914	11	64	224	57	67	180
	1909	14	130	82	102	270	483		1909	9	58	155	40	75	175
	1904	12	99	.....	65	103	298		1904	6	76	.....	44	55	143
Foundry and machine- shop products. <sup>5</sup>	1914	24	750	1,179	560	1,041	2,490	Furniture.....	1914	5	114	231	68	107	270
	1909	14	601	1,054	420	1,033	2,130		1909	4	110	220	55	80	215
	1904	10	595	.....	300	692	1,002		1904	3	75	.....	37	49	138
Ice, manufactured.....	1914	8	130	2,755	76	144	426	Ice, manufactured.....	1914	9	106	2,543	91	112	292
	1909	7	106	2,771	60	77	276		1909	6	75	1,615	60	98	269
	1904	4	40	.....	20	41	140		1904	4	51	.....	33	28	108
Leather goods <sup>6</sup> .....	1914	6	293	170	191	1,490	2,019	Lumber, planing-mill products, not including planing mills connected with sawmills.	1914	8	47	163	48	129	265
	1909	6	297	329	173	1,518	2,202		1909	6	102	267	70	134	253
	1904	10	328	.....	204	960	1,516		1904	7	35	.....	23	34	78
Lumber, planing-mill products, not including planing mills connected with sawmills. <sup>7</sup>	1914	18	190	335	145	419	690	Printing and publishing..	1914	27	315	570	251	391	1,209
	1909	11	213	405	153	437	720		1909	24	213	346	175	178	722
	1904	10	215	.....	107	237	475		1904	19	198	.....	138	106	398
Marble and stone work...	1914	7	57	275	46	116	224	Tobacco, cigars.....	1914	6	24	.....	12	12	36
	1909	8	73	208	52	58	100		1909	4	16	.....	7	10	26
	1904	4	24	.....	17	28	62		1904	6	13	.....	8	9	27
Printing and publishing <sup>11</sup>	1914	122	708	1,018	660	1,145	3,330	All other industries.....	1914	80	1,510	3,997	913	4,731	7,229
	1909	88	731	760	401	802	2,927		1909	70	1,342	3,902	781	4,439	6,537
	1904	74	474	.....	336	412	1,817		1904	43	812	.....	488	2,645	4,210
Tobacco manufactures....	1914	7	22	7	11	20	40								
	1909	5	31	7	13	18	50								
	1904	7	37	.....	10	27	62								
All other industries.....	1914	152	1,959	8,469	1,222	13,170	18,101								
	1909	123	1,874	7,308	941	11,331	16,608								
	1904	85	1,243	.....	514	5,742	8,110								

<sup>1</sup> Includes "saddlery and harness" and "trunks and valises," but excludes "leather goods, not elsewhere specified."<sup>2</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.<sup>3</sup> Includes "boxes, wooden packing," "lumber, planing-mill products"; and "window and door screens and weather strips."<sup>4</sup> Includes "perfumery and cosmetics."<sup>5</sup> Includes "bookbinding and blank-book making"; "engraving, steel and copper plate," but excludes "printing and publishing, music."<sup>6</sup> Includes "sausage, not made in slaughtering and meat-packing establishments."<sup>7</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.<sup>8</sup> Includes "automobile repairing" and "structural ironwork, not made in steel works and rolling mills."<sup>9</sup> Includes "saddlery and harness" and "trunks and valises."<sup>10</sup> Includes "window and door screens and weather strips."<sup>11</sup> Includes "bookbinding and blank-book making" and "engraving, steel and copper plate, including plate printing."

TABLE 32.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904.—Continued.

INDUSTRY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of ma- terials.	Value of prod- ucts.	INDUSTRY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of ma- terials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		
CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.															
HOUSTON—All indus- tries.	1914 1909 1904	276 249 209	5,607 5,338 5,056	18,004 14,866 .....	\$3,590 3,260 2,892	\$16,124 14,321 7,617	\$25,868 23,016 13,564	SAN ANTONIO—All industries.	1914 1909 1904	239 194 141	4,083 3,105 2,457	8,859 6,908 .....	\$2,412 1,760 1,362	\$10,090 6,952 3,741	\$17,849 13,435 7,402
Bread and other bakery products.	1914 1909 1904	22 23 20	291 221 148	405 92 .....	161 114 67	631 412 228	1,113 724 447	Bread and other bakery products.	1914 1909 1904	31 32 19	205 135 81	114 102 .....	105 76 41	380 307 179	610 565 273
Carriages and wagons and repairs.	1914 1909 1904	5 11 8	21 99 80	150 68 .....	13 68 44	14 69 50	37 201 141	Cars and general shop con- struction and repairs by steam-railroad compa- nies.	1914 1909 1904	3 3 3	615 557 818	139 243 .....	395 410 544	412 253 261	840 738 827
Copper, tin, and sheet- iron work.	1914 1909 1904	22 21 12	105 138 112	14 15 .....	79 98 72	121 118 77	277 305 215	Clothing, men's, includ- ing shirts.	1914 1909 1904	5 5 3	207 132 35	30 26 .....	60 38 6	181 96 37	303 185 45
Foundry and machine- shop products. <sup>1</sup>	1914 1909 1904	24 21 13	443 438 290	1,726 1,074 .....	264 298 189	509 782 429	1,281 1,444 878	Confectionery.....	1914 1909 1904	5 7 3	208 208 131	106 86 .....	68 60 36	334 476 178	578 740 313
Lumber and timber prod- ucts. <sup>4</sup>	1914 1909 1904	13 12 11	220 369 410	601 809 .....	114 211 179	234 575 235	450 1,081 622	Copper, tin, and sheet- iron work.	1914 1909 1904	11 7 5	79 53 34	15 16 .....	54 39 20	72 41 35	175 108 70
Oil, cottonseed, and cake..	1914 1909 1904	4 4 .....	276 269 .....	3,030 3,801 .....	138 109 .....	2,784 2,859 .....	3,185 3,555 .....	Foundry and machine- shop products. <sup>1</sup>	1914 1909 1904	15 7 5	348 230 159	461 217 .....	231 139 88	581 160 75	1,050 360 281
Patent medicines and compounds.	1914 1909 1904	7 5 3	7 12 2	2 5 .....	4 7 1	17 8 5	117 38 15	Ice, manufactured .....	1914 1909 1904	6 4 3	124 54 28	913 227 .....	63 33 14	92 53 24	271 168 77
Printing and publishing..	1914 1909 1904	56 44 133	552 443 405	963 713 .....	473 383 306	528 365 192	2,068 1,449 881	Lumber, planing - mill products, not including planing mills connected with sawmills.	1914 1909 1904	8 7 3	165 138 33	484 360 .....	105 89 21	351 104 20	549 237 63
Saddlery and harness.....	1914 1909 1904	4 6 5	27 59 20	22 41 .....	22 30 12	90 68 35	174 174 72	Marble and stone work...	1914 1909 1904	6 5 3	63 64 34	125 65 .....	40 45 26	43 20 32	124 98 74
All other industries.....	1914 1909 1904	119 102 104	3,665 3,240 3,580	11,091 8,248 .....	2,322 1,933 2,022	11,196 9,065 6,366	17,166 14,045 10,293	Printing and publishing..	1914 1909 1904	48 39 135	301 383 944	398 328 .....	305 219 185	336 217 169	1,433 982 766
								Tobacco, cigars and ciga- rettes.	1914 1909 1904	9 5 12	129 90 61	..... ..... .....	32 21 15	75 43 48	157 102 92
								All other industries.....	1914 1909 1904	92 73 47	1,540 1,061 699	0,074 5,239 .....	954 585 368	7,253 5,182 2,683	11,750 9,115 4,525

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

<b>AUSTIN.....</b>	1914 1909 1904	114 108 62	891 754 641	4,824 2,211 .....	\$611 415 340	\$1,714 1,627 771	\$3,371 2,846 1,569		<b>PALESTINE.....</b>	1914 1909 1904	20 20 17	648 745 544	1,302 1,209 .....	\$504 481 310	\$584 622 305	\$1,222 1,313 763	
<b>BEAUMONT.....</b>	1914 1909 1904	67 56 40	1,073 863 732	5,580 4,596 .....	674 645 425	3,442 3,444 1,512	5,191 4,831 2,610		<b>PARIS.....</b>	1914 1909 1904	42 45 29	513 541 210	2,220 2,489 .....	272 247 105	1,538 862 528	2,284 1,430 855	
<b>BROWNSVILLE.....</b>	1914 1909	14 9	76 51	486 414	25 19	74 46	167 121		<b>SAN ANGELO.....</b>	1914 1909	30 26	161 115	937 608	104 71	267 133	499 318	
<b>CLUBURNE.....</b>	1914 1909	26 24	886 825	1,541 1,499	654 533	1,359 859	2,246 1,677		<b>SHERMAN.....</b>	1914 1909 1904	36 36 39	389 273 307	2,366 2,150 .....	221 130 153	5,864 4,047 2,149	7,028 4,676 2,641	
<b>DENISON.....</b>	1914 1909 1904	30 29 25	954 833 725	3,652 2,306 .....	609 516 455	1,175 593 591	2,069 1,314 1,235		<b>TEMPLE.....</b>	1914 1909	37 37	342 366	1,566 1,616	237 215	958 834	1,452 1,346	
<b>GALVESTON.....</b>	1914 1909 1904	116 81 67	1,410 1,094 761	8,939 3,633 .....	955 707 470	5,716 4,207 1,599	8,692 6,308 2,997		<b>TYLER.....</b>	1914 1909 1904	20 23 21	506 484 368	1,332 769 .....	313 288 192	449 536 311	897 906 629	
<b>LAREDO.....</b>	1914 1909 1904	28 23 18	270 213 515	530 353 .....	105 87 181	144 74 196	345 221 454		<b>WACO.....</b>	1914 1909 1904	125 92 76	1,125 1,033 947	5,452 3,669 .....	999 588 440	3,583 2,965 1,779	5,612 4,769 2,980	
<b>MARSHALL.....</b>	1914 1909	28 22	1,166 977	1,963 1,326	691 653	1,000 803	2,099 1,787										

<sup>1</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.<sup>2</sup> Includes "automobile repairing" and "structural ironwork, not made in steel works or rolling mills."<sup>3</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.<sup>4</sup> Includes "boxes, wooden packing," and "window and door screens and weather strips."<sup>5</sup> Figures can not be shown without disclosing individual operations.

TABLE 33.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY.		Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.
			Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	18 and over.		Under 16.				
						Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.	Female.			
									Maximum month.	Minimum month.								
1	All industries.....	5,084	91,114	4,787	3,753	6,794	927	74,853	Ja 70,903	My 72,219	(*)	(*)	(*)	(*)	(*)	\$283,543,820		
2	Artificial limbs.....	4	13	2	3	.....	1	7	Mh 8	Aug 6	7	7	.....	.....	.....	9,519		
3	Artificial stone products.....	25	146	27	12	5	2	100	Aug 123	Dec 65	113	113	.....	.....	.....	116,779		
4	Automobile bodies and parts.....	9	52	14	3	.....	.....	35	Jo 38	Se 32	35	34	1	.....	.....	32,966		
5	Automobile repairing.....	22	122	27	4	2	1	88	.....	.....	86	84	2	.....	.....	99,469		
6	Repair work.....	19	115	23	4	2	1	85	Mh 96	Ja 80	83	81	2	.....	.....	94,269		
7	Vulcanizing tires.....	3	7	4	.....	.....	.....	8	(*) 3	(*) 3	3	3	.....	.....	.....	5,200		
8	Awnings, tents, and sails.....	10	159	10	10	17*	5	108	Jy 140	Oct 90	104	44	60	.....	.....	233,542		
9	Babbitt and white metal.....	3	10	3	.....	2	.....	5	(*) 5	(*) 5	5	5	.....	.....	.....	14,850		
10	Bookbinding and blank-book making.....	5	23	4	.....	1	.....	18	Mh 23	No 13	19	12	6	1	.....	16,683		
11	Boot and shoe findings.....	3	11	2	.....	.....	.....	9	(*) 9	(*) 9	9	9	.....	.....	.....	9,871		
12	Boots and shoes.....	7	72	13	3	1	1	54	Dec 67	Aug 50	57	55	2	.....	.....	81,067		
13	Boxes, wooden packing.....	20	857	23	37	25	7	765	Apr 995	No 603	770	712	63	4	.....	1,970,617		
14	Brass and bronze products.....	7	113	6	9	7	.....	91	Mh 105	Dec 80	85	85	.....	.....	.....	319,036		
15	Bread and other bakery products.....	530	2,815	601	53	159	63	1,949	Aug 2,054	Ja 1,883	1,991	1,607	339	24	17	4,178,559		
16	Brick and tile, terra-cotta, and fire-clay products.....	70	1,071	37	103	58	8	1,705	.....	.....	1,076	1,956	.....	20	.....	4,242,256		
17	Building brick.....	60	1,458	31	84	33	3	1,307	Jy 1,498	Dec 980	1,523	1,503	.....	20	.....	3,006,648		
18	Tile, sewer pipe, fire brick and terra-cotta.....	10	513	6	19	23	5	458	Apr 518	Dec 363	453	453	.....	.....	.....	1,176,608		
19	Brooms, from broom corn.....	31	240	33	14	13	3	177	My 184	Ja 171	184	176	6	2	.....	275,065		
20	Butter.....	51	271	22	30	34	11	174	My 193	Ja 160	170	159	11	.....	.....	1,210,348		
21	Canning and preserving, fruits and vegetables.....	12	160	5	14	49	2	90	.....	.....	339	178	158	3	.....	411,400		
22	Canned vegetables.....	8	80	.....	4	13	1	62	Oct 72	My 48	78	49	20	.....	.....	197,454		
23	Canned fruits.....	9	89	5	10	36	1	37	Aug 190	My 8	201	120	120	3	.....	214,015		
24	Carriage and wagon materials.....	3	38	4	5	4	1	24	Jy 20	Ja 17	22	22	.....	.....	.....	62,027		
25	Carriages, wagons, and repairs.....	20	241	37	15	7	1	181	.....	.....	187	187	.....	.....	.....	506,475		
26	Carriages and wagons.....	22	206	26	11	6	1	102	Aug 185	Ja 133	168	168	.....	.....	.....	446,743		
27	Repair work only.....	7	35	11	4	1	.....	19	Oct 21	Ja 17	19	19	.....	.....	.....	50,732		
28	Cars and general shop construction and repairs by electric-railroad companies.....	10	622	.....	23	14	2	583	Je 648	Dec 532	584	584	.....	.....	.....	977,183		
29	Cars and general shop construction and repairs by steam-railroad companies.....	63	11,750	.....	209	406	40	10,015	Aug 11,190	My 10,410	11,008	11,063	4	1	.....	28,405,388		
30	Cement.....	4	666	.....	21	54	8	583	Ja 720	Fe 436	606	606	.....	.....	.....	7,793,941		
31	Cleansing preparations.....	4	19	3	4	.....	2	10	Je 13	Dec 8	14	13	1	.....	.....	124,831		
32	Clothing, men's.....	18	1,160	12	33	37	10	1,062	Apr 1,155	No 903	1,089	79	1,013	.....	.....	1,083,804		
33	Clothing, women's.....	4	81	3	2	7	2	67	Jy 81	Dec 42	50	29	30	.....	.....	67,880		
34	Coffee, roasting and grinding.....	36	288	26	35	68	14	145	Se 152	Mh 141	150	111	37	2	.....	970,231		
35	Confectionery and ice cream.....	124	1,307	128	69	157	33	930	.....	.....	1,078	684	388	3	3	2,201,926		
36	Confectionery and chewing gum.....	46	1,031	43	44	148	23	773	No 800	Jy 730	836	452	380	1	3	1,632,730		
37	Ice cream.....	78	336	85	25	9	10	207	Jy 287	Ja 131	242	232	8	2	.....	650,106		
38	Cooperage.....	6	237	3	5	11	.....	218	Aug 207	Jy 178	218	217	.....	1	.....	656,220		
39	Copper, tin, and sheet-iron work.....	247	1,070	265	37	30	10	728	Je 705	No 601	752	740	.....	12	.....	1,133,713		
40	Cotton goods.....	12	1,033	.....	34	18	6	1,875	Dec 1,900	Fe 1,811	1,981	1,274	641	37	29	5,252,899		
41	Druggists' preparations.....	5	44	.....	4	9	1	30	Apr 31	Se 29	29	18	10	1	.....	144,193		
42	Engraving, steel and copper plate, including plate printing.....	3	46	7	1	.....	1	37	My 43	Aug 32	39	27	10	.....	2	19,000		
43	Fertilizers.....	8	116	3	7	5	.....	101	My 159	Dec 37	178	178	.....	.....	.....	412,355		
44	Flour-mill and gristmill products.....	191	1,992	173	146	349	24	1,300	Aug 1,379	Apr 1,246	1,313	1,312	1	.....	.....	17,523,983		
45	Food preparations, not elsewhere specified.....	26	431	29	27	52	6	317	Oct 362	Jy 213	340	268	71	1	.....	1,460,975		
46	Foundry and machine-shop products.....	142	3,232	121	140	256	34	2,081	.....	.....	2,728	2,710	7	11	.....	11,023,590		
47	Boiler shops.....	6	70	5	1	1	2	61	My 81	Oct 44	61	61	.....	.....	.....	136,304		
48	Foundries.....	13	217	9	20	8	1	209	Mh 230	No 177	210	210	.....	.....	.....	676,359		
49	Machine shops.....	123	2,015	107	119	247	31	2,411	My 2,678	Dec 2,055	2,457	2,439	7	11	.....	10,210,927		
50	Furniture.....	25	684	18	35	48	6	577	.....	.....	591	575	14	2	.....	2,037,469		
51	Wood, other than rattan and willow.....	15	465	13	20*	33	5	394	Mh 520	No 233	406	391	13	2	.....	1,687,230		
52	Store and office fixtures.....	10	219	5	15	15	1	183	Fe 224	No 145	185	184	1	.....	.....	350,230		
53	Gas, illuminating and heating.....	27	849	1	60	140	29	613	Dec 791	Fe 516	791	788	2	1	.....	12,896,727		
54	Glass, cutting, staining, and ornamenting.....	6	40	6	4	2	2	26	My 30	No 22	23	22	1	.....	.....	40,359		
55	Hand stamps.....	5	16	5	1	.....	.....	10	(*) 10	(*) 10	10	9	1	.....	.....	22,725		
56	Hardware, saddlery.....	3	15	5	.....	.....	.....	10	(*) 10	(*) 10	10	10	.....	.....	.....	22,046		
57	Hats, fur-felt.....	3	21	7	4	.....	.....	13	My 17	Ja 5	12	6	5	1	.....	22,024		
58	Ice, manufactured.....	255	2,553	139	281	190	17	1,926	Dec 2,810	Ja 1,193	2,070	2,035	.....	35	.....	12,698,125		
59	Jewelry.....	26	113	25	3	3	2	80	Dec 88	Aug 74	86	83	2	1	.....	60,636		
60	Lime.....	8	291	4	13	10	2	262	Aug 333	Dec 75	284	284	.....	.....	.....	358,559		
61	Liquors, malt.....	13	1,145	16	41	124	6	958	Jy 1,094	Ja 859	971	971	.....	.....	.....	8,706,819		
62	Lumber and timber products.....	401	10,279	465	322	682	37	17,783	Jy 19,242	No 15,708	19,762	19,717	.....	45	.....	36,265,940		
63	Lumber, planing mill products, not including planing mills connected with sawmills.....	149	1,751	160	97	125	11	1,358	Jy 1,495	Dec 1,100	1,354	1,351	.....	3	.....	3,672,562		

\* Owned power only.

\* Includes rented power, other than electric.

\* No figures given for reasons stated under "Explanation of terms."

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914.

EXPENSES.							Value of products.	Value added by manufacture.	POWER.					Electric horse-power generated in establishments reporting.	
Salaries and wages.			For contract work.	Rent and taxes.		For materials.			Primary horsepower.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.			Fuel and rent of power.	Total.	Steam engines. <sup>1</sup>	Internal-combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>		Electric (rented).

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$9,087,975	\$7,600,992	\$44,821,377	\$1,342,170	\$1,188,502	\$2,750,682	\$242,405,876	\$10,738,385	\$361,279,303	\$108,135,042	335,791	262,200	28,695	2,053	42,943	33,190	1
4,425	600	7,113	20	1,550	35	6,416	142	21,377	14,819	8				8		2
10,525	3,778	61,940	410	2,848	742	60,715	750	185,728	124,263	67		47		20		3
1,650		33,059		6,510	210	38,183	1,108	105,022	65,691	34				34		4
0,000	1,572	58,900		9,487	575	50,657	2,987	104,766	111,122	133		36		97		5
0,000	1,572	57,300		8,887	528	48,367	2,383	154,666	103,916	125		36		89		6
		1,600		600	47	2,290	604	10,100	7,206	8				8		7
15,370	18,105	40,039	1,000	4,355	1,899	286,132	2,088	428,823	140,603	88		23		65		8
	1,080	3,489		600	270	14,150	210	22,800	8,440	4				4		9
	90	11,780		982	72	4,046	270	24,240	19,333	14				14		10
		4,580		420	105	10,547	44	32,032	15,441	2				2		11
5,300	1,113	28,392		2,100	879	54,464	1,366	121,743	65,913	32				32		12
78,385	27,061	343,556	5,601	6,380	14,385	642,281	7,240	1,195,747	546,226	3,950	3,725	4		221	418	13
10,007	7,624	63,050	6,558	6,309	2,533	339,123	12,003	494,763	143,637	189				189		14
74,082	101,308	1,095,427	2,474	129,384	37,357	3,978,476	163,361	7,503,298	3,361,461	2,325	754	425		1,146	473	15
150,160	52,557	778,477	3,680	1,303	20,202	250,191	650,515	2,316,403	1,400,697	8,738	7,955	298		485	304	16
117,212	26,172	506,576	1,592	1,303	21,547	162,810	483,308	1,582,072	936,854	7,014	6,345	254		415	257	17
32,038	26,385	211,901	2,097	4,655	93,381	176,207	733,431	463,843	463,843	1,724	1,610	44		70	47	18
14,278	16,261	95,007		1,919	1,847	260,770	3,602	459,550	195,178	149		114		35		19
33,357	20,638	115,183	17,094	15,031	4,373	1,710,072	41,328	2,280,779	628,779	1,360	759	274		327	13	20
14,100	25,727	37,271	400	2,005	1,235	224,271	7,457	517,901	286,173	285	230	13		42	23	21
8,500	18,195	24,093	400	2,825	747	153,498	5,672	392,278	233,108	198	150	8		40	16	22
5,000	7,532	13,178		80	488	70,773	1,785	125,623	53,065	87	80	5		2	7	23
5,950	3,755	19,935		2,240	397	20,147	932	70,178	40,000	28		1		27		24
11,022	4,032	119,715	820	9,147	4,422	128,087	7,146	418,563	283,330	418		51		317		25
8,122	4,432	109,129	620	5,740	4,324	120,437	6,442	398,906	240,027	397	50	51		296		26
3,500	600	10,586	200	3,407	98	7,650	704	51,657	43,303	21				21		27
32,450	11,207	415,767		65	21,502	244,345	23,455	734,566	466,766	2,364	1,900	3		451	5	28
478,141	514,002	7,825,559	19		52,710	5,394,275	584,153	15,276,387	9,297,950	13,205	7,698	781		4,726	3,554	29
60,751	80,870	370,503	17,215		20,515	548,558	715,326	2,331,004	1,067,210	18,150	1,675	10,920		5,555	8,806	30
7,152	800	5,034	163	1,000	148	11,406	179	37,707	26,122	32		15		17		31
63,998	64,127	394,330		18,305	5,924	1,272,920	11,683	2,080,136	801,553	290		12		248		32
3,200	4,850	31,180		2,210	193	87,490	853	154,848	60,505	20		2		18		33
59,290	113,862	82,585	729	12,411	8,132	2,530,771	21,987	3,325,861	773,103	619		74		545		34
109,440	192,787	412,593	10,705	65,430	17,734	1,984,978	68,897	3,594,357	1,540,482	1,921	931	267		723	174	35
68,561	181,874	282,006	8,050	49,367	12,280	1,413,969	38,107	2,595,310	1,113,204	790	497	23		270	164	36
40,888	10,913	130,587	2,655	16,003	5,454	670,979	30,700	1,029,047	427,278	1,131	434	244		453	10	37
7,020	18,893	93,020		1,152	2,417	592,616	2,151	709,101	174,434	511	475	6		30		38
54,761	27,527	500,599	1,085	48,358	9,578	1,006,564	10,116	2,238,381	1,221,701	287		69		218		39
65,816	20,562	674,724	2,000		29,844	2,515,336	127,852	3,754,785	1,111,597	5,948	5,445			503	30	40
4,890	23,399	15,253		400	1,854	101,910	503	183,837	81,415	9				9		41
1,820	624	20,860		2,460	170	12,850	352	52,400	30,198	8				8		42
12,150	3,906	63,169			984	337,178	29,271	638,277	271,828	522	140	92		290		43
313,947	420,104	797,932	5,440	9,956	94,454	20,202,957	310,230	35,110,301	5,537,114	19,908	12,777	3,296	1,325	2,570	386	44
42,857	64,811	136,276	700	7,266	8,094	3,282,067	49,404	4,051,056	720,425	1,258	1,006	59		193	12	45
315,466	361,410	1,867,390	33,813	25,906	67,493	3,283,591	169,969	7,022,573	4,169,013	7,093	2,864	770		3,459	680	46
1,320	1,714	42,204		1,200	843	70,519	1,993	134,257	61,745	149	25	29		95		47
45,000	10,905	137,255	5,560	2,088	4,439	326,974	19,320	613,993	297,699	700		35		725		48
269,137	348,701	1,087,931	28,253	62,211	2,890,098	148,656	6,874,323	3,830,569	0,184	2,839	706			2,039	680	49
66,663	57,493	355,189	291	8,732	17,226	480,707	21,476	1,236,790	734,607	1,848	815	64		969	65	50
20,598	39,839	228,774	1,804	14,218	315,424	15,268	400,244	790,926	400,244	1,613	740	14		859	60	51
37,065	17,654	126,415	291	6,868	3,008	165,283	6,218	445,864	274,363	235	75	50		110	5	52
95,165	112,206	353,922		5,697	128,120	273,964	494,493	2,185,114	1,416,637	1,759	1,694			65	53	53
5,840	4,336	19,910	2,593	5,000	259	28,804	1,341	72,815	42,170	64		13		41		54
2,120		8,464		3,715	115	11,287	163	36,534	25,084	4				4		55
		9,152		252	90	4,045	619	24,416	18,852	31				19		56
5,300		11,532		780	191	7,513	418	30,226	22,205	10				7		57
350,723	149,976	1,138,102	19,405	10,677	132,686	545,171	1,114,359	5,328,302	3,068,772	42,271	39,248	2,036	368	629	1,470	58
6,170	3,688	95,090	2,237	12,815	656	75,007	1,088	254,181	170,580	41				41		59
28,408	0,871	105,333	500	1,620	1,930	54,781	60,621	347,446	232,044	439	425	9		5		60
202,302	216,352	805,734	2,650	2,640	944,306	2,640,761	287,027	8,470,830	5,511,042	9,068	8,625	225		218	1,902	61
649,066	737,276	9,605,360	614,670	29,238	284,823	8,322,566	239,392	23,144,920	14,562,968	62,824	62,270	477		75	1,005	62
163,923	126,313	924,135	41,410	31,186	25,870	2,304,733	44,293	4,266,953	1,917,927	6,860	4,292	448		2,120	48	63

\* Same number reported for one or more other months.

\* Same number reported throughout year.

\* None reported for one or more other months.

## MANUFACTURES—TEXAS.

TABLE 33.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNINGS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

## THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

1	Marble and stone work.....	135	705	165	30	38	8	464	My	402	De	415	470	470	.....	.....	\$1,023,430
2	Mattresses and spring beds.....	50	380	51	21	23	5	283	Ja	320	Au	251	299	241	50	2	726,632
3	Mineral and soda waters.....	262	908	315	55	45	8	545	Jy	840	Ja	340	609	560	8	34	1,602,010
4	Mirrors, framed and unframed.....	3	17	2	1	2	.....	12	Au	13	Fe	11	12	12	.....	.....	10,164
5	Models and patterns, not including paper patterns.....	4	6	4	.....	.....	.....	2	Ap	4	Fe	1	2	2	.....	.....	7,915
6	Oil, cottonseed, and cake.....	233	5,040	95	588	483	12	4,471	No	7,958	Je	1,207	8,149	8,136	12	.....	27,074,397
7	Optical goods.....	8	51	2	6	8	6	29	(*)	29	(*)	29	29	28	1	.....	117,271
8	Paints.....	8	69	9	6	14	5	35	Ap	47	De	25	38	35	3	.....	278,430
9	Patent medicines and compounds.....	49	185	38	32	20	12	74	Jy	80	De	67	80	62	26	.....	480,578
10	Paving materials.....	18	439	10	20	10	2	307	Jy	484	Fe	328	403	463	.....	.....	680,516
11	Peanuts, grading, roasting, cleaning, and shelling.....	5	80	1	6	7	.....	66	Ja	117	Au	12	119	21	98	.....	107,448
12	Perfumery and cosmetics.....	7	22	5	3	.....	2	12	(*)	12	(*)	12	12	6	6	.....	30,993
13	Photo-engraving.....	6	80	3	6	10	1	54	Ja	64	De	45	50	40	.....	1	96,445
14	Pickles, preserves, and sauces.....	10	189	5	16	30	5	114	Au	167	De	89	151	90	50	2	410,740
15	Pottery, earthen and stone ware.....	11	61	12	3	.....	.....	40	Ap	65	De	27	53	49	.....	4	93,500
16	Printing and publishing, book and job.....	248	2,620	300	148	305	68	1,805	.....	.....	.....	.....	1,800	1,450	310	35	3,920,939
17	Job printing.....	207	2,474	287	134	278	60	1,715	Ja	1,808	Se	1,658	1,716	1,374	302	35	3,580,811
18	Book publishing and printing.....	10	84	3	10	25	8	38	No	51	My	30	37	30	7	.....	220,088
19	Linotype work and typesetting.....	11	68	10	4	2	.....	52	Je	55	Au	47	47	46	1	.....	120,040
20	Printing and publishing, newspapers and periodicals.....	802	5,338	631	207	1,030	241	2,830	.....	.....	.....	.....	2,882	2,530	222	120	8,794,483
21	Printing and publishing.....	60	2,107	37	111	700	140	1,050	De	1,098	Fe	1,003	1,077	1,008	44	25	4,700,197
22	Printing, publishing, and job printing.....	724	3,038	800	151	231	70	1,771	Mh	1,770	Au	1,752	1,805	1,523	178	104	3,950,025
23	Publishing without printing.....	108	103	85	35	48	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	120,201
24	Refrigerators.....	5	24	5	.....	1	.....	18	Jy	31	De	10	15	15	.....	.....	28,056
25	Rice, cleaning and polishing.....	16	487	.....	46	92	4	345	Fe	502	Jy	131	522	511	7	4	3,395,447
26	Saddlery and harness.....	75	825	95	30	118	15	597	De	758	Oc	416	662	644	16	2	2,020,233
27	Salt.....	3	161	5	9	6	1	146	De	153	Ja	130	153	141	10	2	378,253
28	Sausage.....	3	7	2	.....	.....	.....	5	(*)	5	(*)	5	5	3	.....	2	12,949
29	Shipbuilding, wooden, including boat building.....	14	189	13	7	1	.....	168	Se	241	Fe	105	170	168	.....	2	103,854
30	Show cases.....	7	98	10	3	2	.....	83	Mh	97	Oc	54	84	81	.....	.....	184,382
31	Signs and advertising novelties.....	4	30	2	3	2	.....	23	Je	28	Je	20	22	17	3	2	32,173
32	Slaughtering and meat packing.....	18	4,054	5	37	488	38	3,480	Mh	3,862	Au	2,940	3,718	3,416	203	9	14,405,135
33	Structural ironwork, not made in steel works or rolling mills.....	10	325	8	25	28	7	257	Au	318	De	106	258	257	.....	1	909,133
34	Sugar, cane.....	4	16	6	.....	.....	.....	10	No	48	Jy	6	76	74	1	1	53,000
35	Tobacco, cigars, and cigarettes.....	66	444	76	3	17	4	844	Mh	384	Oc	307	324	183	130	2	327,739
36	Trunks and valises.....	12	103	12	8	7	3	73	Jy	79	No	64	72	71	1	.....	152,446
37	Turpentine and resin.....	6	890	5	31	35	.....	809	Au	862	No	731	821	795	.....	26	557,411
38	Vinegar.....	6	69	3	4	32	2	28	Au	20	De	27	27	22	5	.....	203,140
39	Wall plaster.....	3	240	.....	18	23	5	200	Ja	224	De	168	200	195	5	.....	1,048,289
40	Window and door screens and weather strips.....	11	74	10	0	.....	2	60	My	66	De	30	54	54	.....	.....	46,550
41	Wirework.....	5	54	2	6	5	.....	41	Au	54	Ja	30	41	41	.....	.....	75,547
42	Wood preserving.....	6	440	3	19	74	.....	350	Ap	43	Se	271	365	365	.....	.....	3,732,228
43	All other industries *.....	128	6,594	78	195	537	64	5,720	.....	.....	.....	.....	.....	.....	.....	.....	39,050,372

\* Owned power only.

\* Includes rented power, other than electric.

\* Same number reported for one or more other months.

\* All other industries embrace—

Agricultural implements.....	4
Automobiles.....	2
Bags, other than paper.....	3
Bags, paper, not including bags made in paper mills.....	1
Baking powders.....	1
Belting, leather.....	1
Bluing.....	2
Boxes, cigar.....	1
Boxes and cartons, paper.....	3

Carpets, rag.....	2
Cars, steam-railroad, not including operations of railroad companies.....	1
Chemicals.....	3
Clocks.....	1
Coffins, burial cases, and undertakers' goods.....	1
Cordials and flavoring sirups.....	4
Dairymen's and apicarians' supplies.....	3
Dental goods.....	2

Electrical machinery, apparatus, and supplies.....	1
Electroplating.....	2
Engines, steam, gas, and water.....	1
Engraving and diesinking.....	1
Envelopes.....	1
Explosives.....	1
Fancy articles, celluloid.....	1
Felt goods.....	1
Flags and banners.....	1

Flavoring extracts.....	4
Furs, dressed.....	1
Gas and electric fixtures.....	1
Glass.....	2
Groase, soap stock.....	1
Hardware, builders'.....	1
House-furnishing goods, not elsewhere specified.....	1
Iron and steel, steel works and rolling mills.....	1

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal-combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>	Electric (rented).	

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

\$36,003	\$15,461	\$357,012	\$23,302	\$11,060	\$7,988	\$498,291	\$24,839	\$1,366,901	\$843,771	1,531	231	545	.....	755	.....	1
30,155	21,005	151,987	.....	10,644	5,104	589,094	11,077	1,059,587	457,916	909	82	82	.....	745	.....	2
66,924	32,653	277,244	2,110	36,253	13,040	880,854	21,034	1,013,375	1,010,887	1,190	393	342	2	453	5	3
790	1,080	9,436	.....	526	111	20,240	994	52,700	81,466	32	.....	.....	.....	32	.....	4
.....	.....	1,430	.....	210	180	1,900	249	9,526	7,377	30	.....	.....	.....	30	.....	5
893,036	420,624	2,086,540	3,247	7,852	239,440	35,179,801	990,775	41,044,089	5,768,113	60,772	54,097	1,227	320	4,528	1,002	6
14,180	11,360	25,710	.....	9,927	1,231	80,655	1,202	205,080	117,823	30	.....	.....	.....	30	.....	7
12,240	10,572	21,320	.....	5,834	2,986	157,224	1,089	284,490	125,277	165	50	15	.....	100	.....	8
41,480	37,051	31,183	2,625	12,446	2,291	152,816	946	489,518	335,750	87	.....	18	.....	69	.....	9
26,620	9,058	101,270	.....	4,863	1,070	179,741	118,790	618,216	319,085	2,173	1,048	135	.....	390	.....	10
9,640	2,737	17,708	.....	4,050	694	186,155	12,052	247,879	49,672	290	118	115	.....	57	10	11
4,080	1,020	5,640	.....	3,156	215	31,595	108	66,536	34,833	1	.....	.....	.....	1	.....	12
14,222	12,770	51,014	.....	6,152	390	21,179	3,291	136,617	112,177	140	.....	.....	.....	140	.....	13
21,738	46,338	41,534	688	648	2,617	395,200	3,411	693,068	294,457	138	85	.....	.....	63	.....	14
3,036	.....	22,210	50	.....	390	12,347	5,730	62,016	43,030	128	89	39	.....	.....	.....	15
276,100	348,215	1,290,763	97,041	161,525	43,008	1,270,287	50,056	4,711,163	3,390,820	1,755	4	34	.....	1,717	4	16
251,000	320,353	1,200,188	34,210	150,109	39,479	1,295,710	47,346	4,269,593	3,016,537	1,602	4	34	.....	1,054	4	17
19,489	25,020	20,678	62,631	8,332	2,773	61,540	679	333,633	271,414	43	.....	.....	.....	43	.....	18
5,560	2,230	60,927	200	3,084	3,037	107,037	2,031	107,037	102,869	20	.....	.....	.....	20	.....	19
573,718	1,130,131	2,234,052	319,652	196,412	67,682	2,533,908	124,899	10,263,457	7,004,650	4,334	517	1,137	4	2,076	529	20
338,387	840,254	1,117,479	89,341	58,778	38,633	1,004,441	64,304	5,508,072	3,900,224	2,198	510	142	.....	1,546	526	21
108,252	238,570	1,110,573	16,033	128,651	28,778	612,062	60,410	4,202,786	3,220,714	2,131	7	995	4	1,125	3	22
37,079	51,307	.....	214,278	8,983	151	10,802	185	491,009	474,712	5	.....	.....	.....	5	.....	23
.....	1,200	11,702	.....	684	340	13,577	690	41,238	26,071	35	.....	.....	.....	15	.....	24
80,615	106,850	199,311	.....	5,162	24,657	6,330,739	29,448	7,216,359	850,172	5,365	5,082	42	.....	241	350	25
75,378	147,914	390,504	729	56,650	27,036	2,424,006	8,899	3,382,214	949,339	330	.....	22	.....	314	.....	26
14,990	6,388	74,538	100	3,073	2,205	140,369	86,479	424,869	198,621	809	809	.....	.....	.....	10	27
.....	3,850	.....	.....	840	26	31,475	1,228	44,978	12,275	37	.....	.....	.....	37	.....	28
11,410	1,250	123,250	.....	1,291	270	277,827	823	473,524	194,874	316	222	94	.....	.....	1	29
3,800	2,172	58,708	.....	942	1,515	57,294	1,582	161,184	102,308	232	80	5	.....	147	.....	30
5,400	1,855	18,617	103	2,900	164	21,115	34	63,995	42,840	8	.....	.....	.....	8	.....	31
99,417	612,594	2,068,667	1,494	7,230	65,073	43,885,454	538,963	52,645,022	8,520,005	12,276	12,141	31	.....	104	5,405	32
55,269	38,103	172,075	14,709	3,570	3,554	495,285	13,031	970,726	462,410	553	120	23	.....	410	.....	33
.....	.....	2,083	.....	30	134	9,379	1,320	17,803	7,104	80	80	.....	.....	.....	.....	34
11,500	32,815	158,514	175	6,077	48,945	230,651	330	601,973	361,689	3	.....	.....	.....	3	.....	35
17,850	9,145	38,518	.....	0,060	1,435	48,443	974	185,127	135,710	41	.....	.....	.....	41	.....	36
40,453	28,333	207,279	649	.....	2,823	90,110	2,166	608,374	510,098	21	21	.....	.....	.....	.....	37
8,700	37,528	16,840	.....	3,300	1,893	224,002	4,250	455,402	227,150	99	.....	55	.....	14	.....	38
22,329	34,814	113,621	.....	5,050	105,793	64,204	64,204	487,617	317,020	1,102	300	502	.....	300	527	39
6,456	1,200	30,726	2,024	1,974	494	57,803	1,422	132,988	73,703	118	.....	23	.....	95	.....	40
10,420	4,500	32,014	.....	3,090	317	72,391	1,318	147,434	73,815	28	.....	10	.....	18	.....	41
57,339	83,161	227,353	103	1,800	12,137	2,581,027	90,105	3,095,503	454,311	2,950	2,825	125	.....	.....	185	42
477,121	685,654	3,930,642	79,015	88,573	187,726	67,777,298	3,217,277	81,073,370	10,078,825	22,514	16,795	3,073	42	2,694	5,081	43

\* Same number reported throughout the year.

\* None reported for one or more other months.

Lapidary work.....	1	Paper and wood pulp.....	2	Sand-lime brick.....	2	Surgical appliances.....	1
Leather goods, not elsewhere specified.	1	Petroleum refining.....	0	Shirts.....	2	Tobacco, smoking.....	3
Leather, tanned, curried, and finished.....	1	Poultry, killing and dressing.....	2	Smelting, copper.....	1	Tools, not elsewhere specified.....	3
Millinery and lace goods.....	2	Printing and publishing, music.....	2	Soap.....	3	Upholstering materials, excelsior.....	1
Minerals and earth, ground.....	2	Printing materials.....	3	Soda-water apparatus.....	1	Washing machines and clothes wringers.....	2
Mucilage and paste.....	2	Pumps, not including power pumps.....	1	Statuary and art goods.....	2	Waste.....	2
Musical instruments and materials, violins.....	1	Roofing materials.....	2	Staveils and brands.....	2	Whips.....	2
.....	1	Rubber goods, not elsewhere specified.	1	Stereotyping and electrotyping.....	2	Wood, turned and carved.....	5
.....	1	Safes.....	1	Sugar, refining.....	1	.....	.....



## MANUFACTURES—TEXAS.

TABLE 33.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.									WAGE EARNINGS DEC. 31, OR NEAREST REPRESENTATIVE DAY.				Capital.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of---			Male.	Female.	Male.	Female.	
								Maximum month.	Minimum month.						

## CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

1	DALLAS—All industries.....	412	7,258	372	357	1,041	204	5,284	Mh 5,570	No 4,786	5,527	4,447	1,026	24	30	\$23,488,754
2	Automobile bodies and parts.....	3	21	5	.....	.....	.....	16	Jo 22	Co. 12	14	13	1	.....	.....	4,038
3	Awings, tents, and sales.....	3	25	2	3	.....	1	18	Jo 27	No 12	17	8	9	.....	.....	22,870
4	Babbitt and white metal.....	3	10	.....	.....	.....	.....	5	(*) 5	(*) 5	5	5	.....	.....	.....	14,850
5	Bread and other bakery products.....	35	675	40	15	80	18	513	Au 587	My 409	524	316	188	3	17	1,143,492
6	Carriages, wagons, and repairs.....	3	20	3	1	.....	.....	16	Jo 17	Ja 14	16	16	.....	.....	.....	9,325
7	Clothing, men's.....	5	401	0	10	8	7	370	Au 389	No 345	380	37	343	.....	.....	270,395
8	Confectionery and ice cream.....	15	303	0	20	40	4	223	.....	.....	241	167	74	.....	.....	617,240
9	Confectionery.....	7	246	8	13	37	3	185	Mh 202	Ja 151	190	118	72	.....	.....	343,342
10	Ice cream.....	8	57	8	7	3	1	38	Jy 56	Fe 21	51	40	2	.....	.....	273,007
11	Copper, tin, and sheet-iron work.....	20	140	10	9	7	4	101	Au 113	No 84	101	100	.....	1	.....	236,419
12	Foundry and machine-shop products.....	21	817	21	10	100	0	662	My 851	No 433	698	601	6	1	.....	4,843,595
13	Ice, manufactured.....	8	159	.....	14	14	1	130	Jy 150	De 111	133	133	.....	.....	.....	895,652
14	Jewelry.....	10	50	10	1	2	2	35	No 37	De 33	33	31	2	.....	.....	34,608
15	Leather goods.....	6	405	.....	21	78	13	203	De 414	Se 222	333	331	2	.....	.....	2,009,629
16	Lumber, planing-mill products, not including planing mills connected with sawmills.....	13	205	20	8	10	.....	161	Jy 184	De 103	165	165	.....	.....	.....	419,010
17	Marble and stonework.....	7	73	7	5	2	2	57	Se 80	De 33	47	47	.....	.....	.....	180,723
18	Mineral and soda waters.....	3	70	5	4	13	1	47	Jy 75	De 20	40	40	.....	.....	.....	74,839
19	Optical goods.....	8	28	.....	3	4	4	10	(*) 16	(*) 16	16	16	.....	.....	.....	74,889
20	Patent medicines and compounds.....	14	56	8	8	11	6	24	Jy 25	Ja 23	24	18	0	.....	.....	113,481
21	Printing and publishing, book and job.....	67	578	76	34	59	18	391	.....	.....	386	312	60	7	1	779,943
22	Job printing.....	60	524	72	28	50	14	330	Ja 403	Se 336	357	284	65	7	1	627,274
23	Book publishing and printing and linotype work.....	7	54	4	0	9	4	31	Jo 34	Au 28	29	28	1	.....	.....	152,660
24	Printing and publishing, newspapers and periodicals.....	51	720	42	48	201	65	283	.....	.....	292	270	12	1	.....	1,210,880
25	Printing and publishing.....	7	600	.....	31	203	51	256	Jy 277	Fe 223	263	256	7	.....	.....	1,102,708
26	Printing, publishing, and job printing.....	8	55	8	7	9	4	27	Mh 20	Se 24	20	23	5	1	.....	52,621
27	Publishing without printing.....	36	74	34	10	20	10	.....	.....	.....	.....	.....	.....	.....	.....	55,551
28	Tobacco manufactures.....	7	31	8	.....	1	.....	22	Se 26	Co 20	23	20	3	.....	.....	34,654
29	Window and doorscreens and weather strips.....	5	38	5	3	.....	1	29	Jy 41	De 17	34	34	.....	.....	.....	15,673
30	All other industries *.....	105	2,424	70	131	206	49	1,872	.....	.....	2,005	1,668	314	11	12	10,473,463

\*All other industries embrace—

Artificial limbs.....	1	Boxes and cartons, paper.....	1	Cars and general shop construction and repairs by steam-railroad companies.....	1	Cordials and flavoring sirups.....	1
Artificial stone products.....	2	Boxes, wooden packing.....	2	Chemicals.....	3	Cotton goods.....	1
Automobile repairing.....	2	Brass and bronze products.....	1	Cleaning preparations.....	1	Druggists' preparations.....	3
Bags, other than paper.....	2	Brooms, from broom corn.....	1	Clothing, women's.....	1	Engraving and diecasting.....	1
Belting, leather.....	1	Canning, vegetables.....	1	Coffee, roasting and grinding.....	1	Engraving, steel and copper plate, including plate printing.....	1
Bluing.....	1	Carpets, rag.....	1	Coffins, burial cases, and undertakers' goods.....	1	Envelopes.....	1
Bookbinding and blank-book making.....	3	Carrriage and wagon materials.....	2	Cooperage, barrels.....	1	Flags and banners.....	1
Boot and shoe findings.....	2	Cars and general shop construction and repairs by electric-railroad companies.....	2			Flavoring extracts.....	1
Boots and shoes.....	1					Flour-mill and gristmill products.....	3
Boxes, cigar.....	1						

1	EL PASO—All industries.....	117	2,815	94	115	211	48	2,347	My 2,465	No 2,249	2,403	2,309	85	9	.....	\$8,066,074
2	Bread and other bakery products.....	15	141	20	2	0	7	103	De 106	Se 100	107	97	7	3	.....	122,335
3	Cars and general shop construction and repairs by steam-railroad companies.....	4	385	.....	21	28	.....	836	Jy 807	Mh 796	854	854	.....	.....	.....	1,906,073
4	Copper, tin, and sheet-iron work.....	4	41	3	2	4	1	31	Se 35	Fe 24	29	29	.....	.....	.....	49,560
5	Foundry and machine-shop products.....	6	203	4	6	12	3	178	My 200	Oc 145	172	171	.....	1	.....	691,407
6	Ice, manufactured.....	3	80	.....	6	8	1	74	Ja 96	De 55	77	77	.....	.....	.....	738,273
7	Jewelry.....	0	30	8	2	1	.....	19	De 22	Au 17	22	22	.....	.....	.....	11,950
8	Lumber, planing-mill products, not including planing mills connected with sawmills.....	3	91	2	5	6	.....	78	Oc 100	Fe 58	95	95	.....	.....	.....	207,653
9	Marble and stone work.....	3	12	2	2	.....	.....	8	Se 9	De 7	7	7	.....	.....	.....	10,614
10	Mineral and soda waters.....	4	25	2	2	6	.....	18	Jy 27	Ja 9	21	21	.....	.....	.....	52,164
11	Printing and publishing, job work only.....	11	120	7	11	7	4	100	No 118	Jy 91	121	103	17	1	.....	150,854
12	Printing and publishing, newspapers and periodicals.....	11	207	8	10	61	20	108	De 114	Au 103	114	114	.....	.....	.....	295,914
13	Saddlery and harness.....	4	16	2	.....	1	.....	13	(*) 13	(*) 13	13	13	.....	.....	.....	29,518
14	All other industries *.....	43	946	36	43	74	12	781	.....	.....	771	706	61	4	.....	4,399,750

\*All other industries embrace—

Automobile bodies and parts.....	2	Brick.....	2	Confectionery and ice cream.....	4	Gas, illuminating and heating.....	3
Awings, tents, and sails.....	1	Cars and general shop construction and repairs by electric-railroad companies.....	1	Flour-mill and gristmill products.....	1	Glass, cutting, staining, and ornamenting.....	1
Boxes, wooden packing.....	1	Coffee, roasting and grinding.....	1	Food preparations, macaroni, vermicelli, noodles, etc.....	1	Lapidary work.....	1
Brass and bronze products.....	1		2	Gas and electric fixtures.....	1		

1 Owned power only.

2 Includes rented power, other than electric.

# MANUFACTURES—TEXAS.

1491

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.							Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.			Primary horsepower.				Electric horsepower generated in establishments reporting.	
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.			Fuel and rent of power.	Total.	Steam engines. <sup>1</sup>	Internal-combustion engines. <sup>2</sup>		Water wheels and motors. <sup>1</sup>

## CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$801,756	\$1,330,010	\$3,464,228	\$213,005	\$226,007	\$250,298	\$19,144,217	\$426,140	\$31,065,073	\$11,494,716	15,517	10,438	1,204	.....	3,875	2,181	1
.....	.....	15,978	.....	3,900	52	16,885	115	44,850	27,850	3	.....	.....	.....	3	.....	2
4,360	1,265	7,495	.....	1,380	197	44,300	261	65,741	21,176	0	.....	.....	.....	6	.....	3
.....	1,680	3,480	.....	600	270	14,150	210	22,800	8,440	4	.....	.....	.....	4	.....	3
27,480	83,387	257,054	.....	18,711	8,138	957,421	29,193	1,939,010	952,396	917	430	295	.....	192	344	5
1,500	.....	14,625	.....	2,220	89	6,436	554	27,277	20,287	15	.....	.....	.....	15	.....	6
23,000	12,120	147,455	.....	7,840	806	425,278	3,257	720,816	298,281	107	.....	.....	.....	107	.....	7
35,183	48,417	102,628	2,050	18,956	4,183	455,282	10,693	832,562	357,587	582	480	2	.....	100	89	8
10,763	44,397	68,272	300	16,700	1,861	354,377	7,678	615,662	253,607	187	135	2	.....	50	89	9
15,420	4,020	34,356	1,750	2,256	2,322	100,905	12,015	216,900	103,980	395	345	.....	.....	50	.....	10
13,603	7,525	81,007	.....	6,802	2,480	228,043	1,422	442,960	213,495	98	.....	.....	.....	98	.....	11
69,233	174,493	501,730	6,060	6,035	27,752	839,166	21,714	2,115,550	1,254,670	1,096	763	.....	.....	333	340	12
25,530	13,630	76,179	.....	14,823	40,008	94,856	94,856	428,300	282,496	2,755	2,730	25	.....	34	.....	13
2,400	2,708	45,383	1,000	7,590	436	24,069	647	111,496	86,180	22	.....	.....	.....	22	.....	14
55,550	116,118	101,351	.....	24,720	17,816	1,493,990	4,998	2,010,246	520,258	170	.....	.....	.....	170	.....	15
19,380	20,028	126,492	.....	6,475	2,313	377,829	2,984	607,678	226,865	302	145	35	.....	122	.....	16
6,820	4,392	45,911	13,344	1,020	856	113,569	2,287	224,215	108,359	275	146	30	.....	49	.....	17
8,075	10,415	27,487	.....	4,710	562	123,899	795	210,035	94,371	31	.....	.....	.....	31	.....	18
8,680	6,240	14,230	.....	3,147	965	59,711	624	129,964	60,629	14	.....	.....	.....	14	.....	19
10,700	12,925	11,755	200	6,215	639	36,339	361	108,004	71,304	28	.....	.....	.....	28	.....	20
62,693	87,959	312,881	55,866	34,284	10,635	301,705	10,750	1,207,442	894,987	377	.....	.....	.....	377	.....	21
62,793	76,227	271,608	12,724	32,484	17,731	266,644	10,158	985,126	708,324	360	.....	.....	.....	360	.....	22
9,900	11,732	41,273	43,142	1,800	1,904	35,061	592	222,316	186,663	8	.....	.....	.....	8	.....	23
116,769	341,010	324,810	113,319	14,309	10,237	807,985	13,318	2,083,140	1,261,846	626	410	7	.....	209	391	24
94,249	306,112	302,201	32,095	6,985	9,958	772,100	12,653	1,799,591	1,014,838	598	410	7	.....	181	301	25
8,100	11,242	22,609	1,800	3,980	228	25,670	665	94,576	68,541	28	.....	.....	.....	28	.....	26
14,420	23,656	.....	79,424	3,344	51	10,215	.....	188,682	178,467	.....	.....	.....	.....	.....	.....	27
.....	225	11,412	.....	480	3,581	19,479	24	39,843	20,340	7	.....	.....	.....	7	.....	28
3,336	600	18,140	1,840	954	116	37,058	770	82,681	44,853	33	.....	.....	.....	33	.....	29
306,555	384,873	1,126,670	18,816	56,710	143,352	12,712,015	217,307	17,588,364	4,650,046	8,040	5,334	750	.....	1,956	983	30

Food preparations, ice-cream cones...	2	Lime.....	1	Paper and wood pulp.....	1	Slaughtering and meat packing.....	2
Furniture, wood, and store and office fixtures.....	4	Liquors, malt.....	1	Perfumery and cosmetics.....	4	Soda-water apparatus.....	1
Gas, illuminating and heating.....	2	Mattresses and spring beds.....	3	Photo-engraving.....	2	Stereotyping and electrotyping.....	1
Glass, cutting, staining, and ornamenting.....	1	Millinery and lace goods.....	2	Pickles and sauces.....	1	Structural ironwork, not made in steel works or rolling mills.....	1
Grease, soap stock.....	1	Mirrors, framed and unframed.....	1	Printing and publishing, music.....	1	Vinegar.....	1
Hand stamps.....	1	Mucilage and paste.....	2	Printing materials.....	2	Washing machines and clothes wringers.....	1
House-furnishing goods, not elsewhere specified.....	1	Musical instruments and materials, violins.....	1	Refrigerators.....	1	Waste.....	1
		Oil, cottonseed, and cake.....	2	Sausage.....	1	Wirework.....	1
		Paints.....	2	Show cases.....	3		
				Signs and advertising novelties.....	3		

\$257,054	\$252,866	\$1,663,117	\$23,665	\$75,040	\$50,000	\$2,640,871	\$232,000	\$6,135,214	\$3,262,343	6,778	5,807	66	.....	905	1,985	1
6,200	9,480	60,237	.....	6,307	1,349	231,623	9,337	393,840	152,880	46	.....	.....	.....	46	.....	2
45,431	38,903	642,150	.....	.....	73	412,402	40,463	1,320,705	867,840	920	920	.....	.....	.....	1,245	3
2,950	1,136	32,755	.....	1,580	319	63,258	592	116,758	52,908	24	.....	.....	.....	24	.....	4
13,780	18,055	131,498	.....	1,596	2,720	173,222	16,960	420,639	230,467	537	450	62	.....	25	315	5
8,640	6,148	45,548	.....	.....	5,177	6,352	58,008	235,601	171,181	1,565	1,560	.....	.....	5	30	6
3,770	980	25,191	.....	2,423	77	15,300	437	59,756	43,959	8	.....	.....	.....	8	.....	7
10,200	8,440	65,781	.....	5,100	644	97,293	2,403	211,804	111,604	210	160	.....	.....	50	.....	8
1,300	.....	6,280	.....	780	63	10,350	48	20,080	9,682	5	.....	.....	.....	5	.....	9
9,600	.....	10,778	.....	2,551	402	25,764	880	80,968	54,344	16	.....	4	.....	12	.....	10
19,432	9,349	62,374	50	12,915	1,409	51,073	3,101	202,596	148,422	65	.....	.....	.....	65	.....	11
33,909	88,103	110,437	23,223	12,955	1,564	90,611	6,829	506,633	409,193	134	.....	.....	.....	134	.....	12
.....	420	12,450	.....	2,130	138	31,676	142	52,734	20,916	9	.....	.....	.....	9	.....	13
101,842	72,752	467,632	392	26,703	42,125	1,431,887	92,790	2,513,604	988,957	3,239	2,717	.....	.....	522	395	14

Lime.....	1	Patent medicines and compounds.....	1	Sand-lime brick.....	1	Tobacco, cigars.....	4
Mattresses and spring beds.....	2	Paving materials.....	2	Sausage.....	1	Trunks and valises.....	1
Optical goods.....	2	Photo-engraving.....	1	Structural ironwork, not made in steel works or rolling mills.....	1	Wirework.....	1
Paints.....	1	Roofing materials, other than metal.....	1				

<sup>1</sup> Same number reported for one or more other months.

<sup>2</sup> Same number reported throughout the year.

## MANUFACTURES—TEXAS.

TABLE 33.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNINGS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

1	<b>FORT WORTH—All industries.</b>	180	3,044	157	184	317	78	2,308	Aug 2,401	No 2,158	2,315	1,951	350	11	3	\$4,595,168
2	Artificial stone products.	4	20	3	3	—	2	12	Aug 26	Jan 1	17	17	—	—	—	13,670
3	Bread and other bakery products.	13	117	19	7	1	5	85	Dec 86	No 83	83	81	1	1	—	91,517
4	Carriages, wagons, and repairs.	4	33	7	4	3	—	19	Mar 21	Dec 10	19	19	—	—	—	83,107
5	Cars and general shop construction and repairs by steam-railroad companies.	4	614	—	10	16	2	580	Aug 605	May 565	598	597	1	—	—	2,088,699
6	Coffee, roasting and grinding.	3	30	6	5	4	2	13	( ) 13	( ) 13	13	12	1	—	—	58,140
7	Copper, tin, and sheet-iron work.	12	66	11	8	2	2	43	Jan 51	Dec 40	51	50	—	1	—	53,664
8	Foundry and machine-shop products.	11	90	0	11	5	1	64	Jan 70	Dec 50	68	58	—	—	—	215,599
9	Furniture.	5	133	2	5	12	—	114	Jan 124	Dec 98	99	97	2	—	—	249,528
10	Ice, manufactured.	9	134	1	17	10	—	106	Aug 130	Jan 75	123	123	—	—	—	745,590
11	Lumber, planing-mill products, not including planing mills connected with sawmills.	8	72	12	8	4	1	47	Jan 61	Dec 35	42	42	—	—	—	159,322
12	Marble and stone work.	4	37	7	3	—	—	27	Jan 31	Jan 19	27	27	—	—	—	43,868
13	Mineral and soda waters.	4	26	3	3	1	—	19	Jan 24	Jan 14	18	18	—	—	—	49,760
14	Patent medicines and compounds.	6	11	5	3	—	—	3	( ) 3	( ) 3	3	3	—	—	—	16,725
15	Printing and publishing, job work only.	17	208	20	12	30	8	192	Jan 39	Dec 106	170	134	36	—	—	494,727
16	Printing and publishing, newspapers and periodicals.	10	200	7	13	90	27	123	—	—	140	132	3	5	—	462,298
17	Printing and publishing and job printing.	6	254	5	11	90	25	123	Dec 138	Jan 118	140	132	3	5	—	459,363
18	Printing without printing.	4	6	2	2	—	2	—	—	—	—	—	—	—	—	2,905
19	Saddlery and harness.	4	20	3	4	1	1	11	Jan 14	Dec 8	13	13	—	—	—	49,347
20	Tobacco, cigars.	6	32	8	—	—	—	24	Dec 30	Mar 16	25	17	7	1	—	13,421
21	All other industries*.	54	1,081	34	68	132	27	820	—	—	816	511	209	3	3	3,716,210

\*All other industries embrace—

Artificial limbs.	1	Cars and general shop construction and repairs by electric-railroad companies.	1	Clothing, women's.	1	Engraving, steel and copper plate, including plate printing.	1
Awning, tents, and sails.	2	—	—	Confectionery and confection.	2	Flavoring extracts.	1
Brass products.	2	—	—	Cordials and flavoring syrups.	1	Flour-mill and gristmill products.	3
Brick.	1	Cars, steam-railroad, not including operations of railroad companies.	1	Electrical machinery, apparatus, and supplies (telephone equipment).	1	Food preparations, not elsewhere specified.	4
Brooms, from broom corn.	1	Clocks.	1	Electroplating.	1	—	—
Butter.	2	Clothing, men's.	2	—	—	—	—
Canning vegetables.	1	—	—	—	—	—	—

1	<b>HOUSTON—All industries.</b>	270	7,030	245	342	741	101	5,607	Jan 6,037	No 5,318	5,729	5,280	427	22	—	\$25,442,620
2	Automobiles, bodies, and parts.	3	15	4	2	—	—	9	( ) 9	( ) 9	9	9	—	—	—	12,002
3	Bread and other bakery products.	22	375	22	15	38	0	291	Dec 314	Jan 284	292	215	75	2	—	1,198,374
4	Carriages, wagons, and repairs.	6	39	6	3	1	—	21	Dec 22	Jan 20	22	22	—	—	—	63,507
5	Coffee, roasting and grinding.	6	88	3	11	28	3	43	Aug 44	Dec 42	43	25	18	—	—	222,231
6	Confectionery and ice cream.	9	71	0	4	7	3	51	—	—	55	47	8	—	—	112,794
7	Confectionery.	4	32	3	2	5	2	20	Mar 27	Dec 15	21	17	7	—	—	28,345
8	Ice cream.	5	30	3	2	2	1	31	Jan 45	Dec 12	31	30	1	—	—	84,440
9	Copper, tin, and sheet-iron work.	22	137	22	5	5	—	105	Jan 122	Dec 95	102	99	—	3	—	140,458
10	Flour-mill and gristmill products.	4	47	5	8	8	2	21	( ) 21	( ) 21	24	24	—	—	—	134,213
11	Food preparations, not elsewhere specified.	6	76	8	3	6	1	57	Jan 61	Aug 50	61	58	3	—	—	180,411
12	Foundry and machine-shop products.	21	505	13	34	37	2	419	Apr 461	Dec 362	446	445	—	1	—	1,578,748
13	Furniture, wood, including store and office fixtures.	4	234	5	14	18	4	193	Feb 214	Dec 135	192	160	2	—	—	684,381
14	Ice, manufactured.	4	104	3	10	6	1	84	Aug 102	Feb 63	68	68	—	—	—	408,325
15	Jewelry.	3	12	2	—	—	—	10	Dec 14	Jan 9	13	13	—	—	—	4,155
16	Lumber, planing-mill products, not including planing mills connected with sawmills.	10	247	11	10	19	—	207	May 213	Dec 133	206	206	—	—	—	620,926
17	Mattresses and spring beds.	6	41	4	1	1	—	35	Jan 40	Dec 32	32	20	6	—	—	90,197
18	Mineral and soda waters.	9	60	7	2	3	2	46	Jan 60	Dec 29	37	37	—	—	—	137,728
19	Marble and stone work.	3	18	3	1	—	—	11	Jan 17	Dec 11	11	11	—	—	—	22,145
20	Oil, cottonseed, and cake.	4	336	—	14	45	1	276	Dec 537	Apr 59	462	462	—	—	—	1,623,062
21	Patent medicines and compounds.	7	28	6	3	9	3	7	( ) 7	( ) 7	7	7	4	3	—	129,403
22	Printing and publishing, book and job.	30	420	27	24	47	7	315	Jan 327	Dec 301	312	260	48	4	—	591,767
23	Printing and publishing, newspapers and periodicals.	26	488	18	33	160	34	237	—	—	231	208	13	10	—	1,971,149
24	Printing and publishing.	4	361	2	26	128	23	182	May 190	Dec 175	175	159	8	8	—	1,821,869
25	Printing, publishing, and job printing.	7	96	4	4	27	6	55	Dec 62	Aug 49	56	49	5	2	—	123,583
26	Publishing without printing.	15	31	12	3	11	5	—	—	—	—	—	—	—	—	25,697
27	Rice, cleaning and polishing.	5	162	—	18	33	—	111	Dec 167	Jan 41	162	161	1	—	—	1,113,290
28	Saddlery and harness.	4	49	13	3	5	1	27	Dec 53	Dec 21	54	53	1	—	—	110,015
29	Tobacco, cigars.	3	7	4	—	—	—	3	Jan 5	Dec 2	3	2	1	—	—	3,345
30	All other industries*.	60	3,487	54	124	259	28	3,022	—	—	2,915	2,065	248	2	—	14,176,952

\*All other industries embrace—

Artificial limbs.	1	Boots and shoes.	1	Cars and general shop construction and repairs by electric-railroad companies.	1	Clothing, men's.	2
Artificial stone products.	2	Boxes and cartons, paper.	1	—	—	Cooperage.	1
Automobile repairing.	1	Boxes, wooden packing.	1	Cars and general shop construction and repairs by steam-railroad companies.	1	Cordials and flavoring syrups.	1
Awning, tents, and sails.	2	Brass and bronze products.	1	—	—	Druggists' preparations.	1
Bags, other than paper.	1	Brick.	2	Cars and general shop construction and repairs by steam-railroad companies.	2	Fancy articles, celluloid.	1
Bookbinding and blank-book making.	1	Brooms, from broom corn.	2	—	—	Gas, illuminating and heating.	1
—	—	Butter.	1	Cleansing and polishing preparations.	1	—	—

1 Owned power only.

2 Includes rented power, other than electric.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal-combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>	Electric (rented).	

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

\$322,862	\$411,265	\$1,541,610	\$23,560	\$88,681	\$105,873	\$5,592,658	\$239,569	\$9,973,882	\$4,141,655	7,815	5,234	103	.....	2,478	363	1
4,200	1,320	7,194	.....	60	10	10,632	25	40,569	29,912	5	.....	5	.....	.....	.....	2
7,060	3,420	54,876	310	5,502	917	194,170	8,256	317,520	115,094	73	.....	.....	.....	73	.....	3
3,500	2,300	11,371	.....	2,365	161	15,933	703	62,721	45,721	22	.....	.....	.....	22	.....	4
18,720	15,732	340,936	.....	659	659	158,790	22,397	557,234	376,047	225	225	.....	.....	.....	25	5
8,000	5,008	6,624	.....	2,820	644	98,415	608	138,817	39,734	22	.....	.....	.....	22	.....	6
10,880	2,340	46,573	100	3,516	506	80,622	272	174,500	93,606	8	.....	.....	.....	8	.....	7
11,800	11,601	56,704	75	3,300	1,095	99,936	7,545	180,085	112,604	224	.....	.....	.....	224	.....	8
9,201	14,073	68,304	.....	3,228	1,862	104,068	2,062	269,534	162,504	231	120	.....	.....	111	.....	9
20,100	10,698	91,493	.....	0,528	37,100	74,806	292,441	180,535	136,855	2,543	2,543	.....	.....	21	127	10
11,700	3,800	48,393	.....	2,085	574	126,528	2,922	265,305	136,855	163	40	10	.....	113	.....	11
4,080	.....	18,895	.....	910	408	26,997	1,624	75,445	47,724	140	.....	4	.....	136	.....	12
4,600	900	11,740	150	1,680	525	30,993	389	84,271	53,189	18	.....	.....	.....	18	.....	13
1,650	.....	1,860	.....	750	150	6,993	157	17,643	10,493	12	.....	10	.....	2	.....	14
23,466	60,665	140,700	266	15,721	3,405	142,805	5,007	530,275	382,493	244	.....	.....	.....	244	.....	15
43,052	90,840	104,700	12,461	8,880	3,503	235,598	7,620	678,708	435,490	332	.....	.....	.....	332	.....	16
40,272	90,480	104,700	.....	8,620	3,503	235,598	7,620	654,957	411,739	332	.....	.....	.....	332	.....	17
2,780	366	.....	12,461	260	.....	.....	.....	23,751	23,751	.....	.....	.....	.....	.....	.....	18
4,345	1,354	7,531	.....	4,800	417	42,096	141	74,836	31,699	12	.....	10	.....	2	.....	19
.....	.....	12,255	.....	936	3,068	12,187	.....	35,781	23,594	.....	.....	.....	.....	.....	.....	20
120,728	180,908	505,350	10,108	32,128	80,751	4,209,095	104,075	6,178,561	1,865,891	3,641	2,327	64	.....	1,150	211	21

Gas, illuminating and heating.....	1	Mattresses.....	2	Pickles and sauces.....	1	Trunks.....	2
Glass, cutting, staining, and ornamenting.....	2	Models and patterns.....	3	Printing and publishing, music.....	1	Upholstering materials, excelsior.....	1
Jewelry.....	1	Oil, cottonseed and cake.....	1	Slaughtering.....	1	Vinegar.....	1
Lime.....	1	Perfumery and cosmetics.....	1	Structural ironwork, not made in steel works or rolling mills.....	1	Window and door screens and weather strips.....	1
Liquors, malt.....	1	Photo-engraving not done in printing establishments.....	1	Surgical appliances, trusses.....	1		

\$705,539	\$808,979	\$3,589,911	\$68,912	\$135,012	\$468,510	\$15,547,216	\$576,754	\$25,868,010	\$9,744,040	18,004	11,998	701	.....	5,305	1,089	1
450	.....	8,498	.....	750	70	12,358	171	34,805	22,276	5	.....	.....	.....	5	.....	2
21,182	48,283	161,286	.....	8,002	10,633	600,038	24,572	1,112,990	482,380	405	.....	.....	.....	.....	.....	3
900	304	13,464	.....	1,420	352	13,638	644	37,351	23,019	150	310	.....	.....	95	129	4
24,080	64,504	22,010	300	1,370	1,573	780,769	0,395	1,051,951	258,787	175	.....	.....	.....	150	.....	5
5,850	7,380	24,056	.....	3,255	912	127,511	4,293	197,321	65,517	149	.....	75	.....	175	.....	6
2,100	5,114	7,318	.....	2,820	186	21,684	442	41,978	19,852	20	.....	.....	.....	74	.....	7
3,750	2,206	17,038	.....	445	726	105,827	3,851	155,343	45,605	129	.....	75	.....	20	.....	8
7,920	4,738	79,172	200	5,611	1,242	120,169	952	276,827	155,706	14	.....	4	.....	10	.....	9
10,000	8,100	12,894	.....	3,300	746	570,311	5,561	624,409	48,534	190	.....	.....	.....	190	.....	10
2,930	3,060	20,716	700	2,930	624	170,758	3,895	237,151	56,528	141	12	16	.....	113	.....	11
85,489	43,992	243,921	.....	8,860	10,077	446,001	25,380	1,201,861	730,471	1,675	180	100	.....	1,386	10	12
32,732	20,099	117,537	291	400	4,947	115,916	10,720	377,298	250,632	525	180	.....	.....	365	.....	13
18,390	6,270	66,725	.....	1,000	4,925	25,541	54,830	300,315	219,944	1,651	1,416	235	.....	.....	19	14
24,145	15,247	100,407	238	1,050	42	22,542	114	39,850	17,104	2	.....	.....	.....	2	.....	15
.....	.....	.....	.....	1,453	5,974	216,514	3,374	418,043	198,155	587	506	27	.....	55	5	16
1,500	1,500	22,718	.....	500	479	60,294	1,553	106,874	45,027	165	3	.....	.....	162	.....	17
3,105	2,035	25,026	.....	2,240	1,189	54,844	1,647	109,325	52,834	91	60	.....	.....	31	.....	18
1,800	.....	12,630	.....	720	159	8,722	3,036	41,035	29,877	47	.....	.....	.....	47	.....	19
33,752	42,060	137,925	200	19,243	2,785,058	49,381	3,185,103	400,604	3,030	3,030	3,030	.....	.....	.....	30	20
8,500	12,977	3,658	.....	3,256	207	10,656	14	117,491	100,821	2	.....	.....	.....	2	.....	21
48,429	46,063	250,070	15,477	30,990	3,280	208,201	7,094	803,854	588,559	245	.....	.....	.....	245	.....	22
92,158	197,521	222,514	42,053	22,176	13,497	296,875	16,037	1,264,402	951,490	718	100	6	.....	612	.....	23
79,383	155,310	179,652	2,500	13,819	13,049	251,017	14,203	997,135	731,015	636	100	.....	.....	536	.....	24
7,375	28,824	42,862	3,237	5,722	438	44,998	1,750	168,108	121,411	77	.....	6	.....	71	.....	25
5,400	13,387	.....	36,316	2,635	10	860	75	99,090	98,104	5	.....	.....	.....	5	.....	26
37,850	41,426	63,744	.....	102	5,803	2,098,936	10,543	2,397,004	287,525	1,755	1,635	.....	.....	121	40	27
10,800	3,640	22,052	.....	3,900	318	80,770	613	173,792	83,409	22	.....	.....	.....	22	.....	28
.....	.....	2,504	.....	250	830	5,028	.....	9,476	4,448	.....	.....	.....	.....	.....	.....	29
233,511	202,510	1,943,620	9,453	24,471	381,394	6,732,716	345,956	11,748,915	4,670,243	6,259	4,587	229	.....	1,443	1,756	30

Glass, cutting, staining, and ornamenting.....	2	Models and patterns, not including paper patterns.....	1	Printing materials.....	1	Stereotyping and electrotyping.....	1
Hand stamps.....	2	Optical goods.....	1	Pumps, not including power pumps.....	1	Structural ironwork, not made in steel works or rolling mills.....	2
Hats, fur-felt.....	2	Paints.....	2	Refrigerators.....	1	Trunks and valises.....	1
Liquors, malt.....	1	Paving materials.....	1	Shipbuilding, wooden, including boat building.....	1	Vinegar.....	1
Lumber and timber products.....	1	Photo-engraving.....	1	Slaughtering and meat packing.....	1	Window and door screens.....	1
Mirrors, framed and unframed.....	2	Pickles, preserves, and sauces.....	1	Soap.....	1	Wood, turned and carved.....	1

<sup>1</sup> Same number reported for one or more other months.<sup>2</sup> Same number reported throughout the year.

TABLE 33.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNINGS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

## CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

1	SAN ANTONIO—All industries...	239	5,054	201	184	513	77	4,083	Aug 4,220	My 3,046	4,322	3,734	573	14	1	\$11,448,953
2	Automobile repairing.....	7	62	7	1	1	1	52	Feb 56	Oct 40	51	40	2	.....	.....	25,647
3	Bread and other bakery products.....	31	213	30	.....	1	1	205	Jy 209	So 201	202	175	26	1	.....	257,089
4	Cars and general shop construction and repairs by steam-railroad companies.....	3	628	.....	3	8	2	615	So 655	Je 570	630	630	.....	.....	.....	512,151
5	Clothing, men's, including shirts.....	5	210	3	2	7	.....	207	Aug 242	De 126	217	9	208	.....	.....	106,680
6	Coffee, roasting and grinding.....	5	30	4	2	2	1	21	(4) 21	(4) 21	21	18	3	.....	.....	73,337
7	Confectionery and ice cream.....	8	205	5	0	33	11	237	Oct 228	Je 186	213	134	109	.....	.....	470,090
8	Confectionery.....	5	259	3	7	33	8	208	Oct 228	Je 186	208	101	107	.....	.....	435,740
9	Ice cream.....	3	36	2	2	.....	3	20	Aug 35	Jan 21	35	33	2	.....	.....	41,250
10	Copper, tin, and sheet-iron work.....	11	93	13	.....	1	.....	79	So 86	Fe 73	80	85	.....	1	.....	84,581
11	Foundry and machine-shop products.....	8	353	6	9	30	12	206	Oct 301	Fe 246	301	300	1	.....	.....	737,171
12	Ice, manufactured.....	6	147	3	8	11	1	121	Jy 165	De 81	107	107	.....	.....	.....	670,402
13	Jewelry.....	3	15	2	.....	.....	.....	13	De 15	Aug 10	15	14	.....	1	.....	11,448
14	Lumber, planing-mill products, not including planing mills connected with sawmills.....	8	109	7	12	13	2	105	Jy 105	De 137	130	130	.....	.....	.....	431,423
15	Marble and stone work.....	6	75	5	3	2	.....	63	My 66	Jan 54	65	65	.....	.....	.....	80,000
16	Mattresses and spring beds.....	7	32	8	.....	.....	.....	24	Jan 20	Jy 22	26	23	2	1	.....	69,085
17	Mineral and soda water.....	5	36	3	0	3	1	23	Jy 20	Jan 17	21	21	.....	.....	.....	105,310
18	Oil, cottonseed, and cake.....	4	170	.....	10	13	1	146	Oct 213	My 59	105	100	5	.....	.....	646,602
19	Patent medicines and compounds.....	3	13	5	2	3	.....	3	(4) 3	(4) 3	3	3	.....	.....	.....	8,590
20	Pickles and sauces.....	4	108	1	7	20	5	71	Jan 96	No 51	82	61	21	.....	.....	178,802
21	Printing and publishing, book and job.....	24	314	17	21	50	5	215	No 227	Aug 200	215	170	31	5	.....	538,533
22	Printing and publishing, newspapers and periodicals.....	21	373	21	12	149	15	176	.....	.....	184	166	10	1	1	425,655
23	Printing and publishing.....	9	301	5	8	137	11	140	Fe 140	Apr 129	141	126	15	.....	.....	377,768
24	Printing, publishing, and job printing.....	7	57	8	3	9	1	36	De 44	Apr 32	43	40	1	1	1	43,887
25	Publishing without printing.....	8	15	8	1	3	3	.....	.....	.....	.....	.....	.....	.....	.....	4,000
26	Tobacco, cigars, and cigarettes.....	9	153	11	.....	9	4	120	Mh 102	So 93	110	7	103	.....	.....	60,402
27	Trunks and valises.....	3	16	4	.....	.....	.....	12	Jy 13	No 10	13	13	.....	.....	.....	8,205
28	All other industries*.....	55	1,480	40	71	145	17	1,207	.....	.....	1,387	1,340	43	4	.....	5,930,703

\*All other industries embrace—

Artificial stone products.....	1	Brooms, from broom corn.....	2	Dairymen's, poultrymen's, and	1	Flour-mill and gristmill products....	3
Awmbags, tents, and sails.....	2	Cars and general shop construction	2	and furriers' supplies.....	1	Food preparations, not elsewhere	5
Boot and shoe findings.....	1	and repairs by electric-railroad com-	2	Dental goods.....	2	specified.....	3
Boxes and cartons, paper.....	1	panies.....	1	Electroplating.....	1	Furniture.....	1
Boxes, wooden packing.....	1	Cooperage.....	2	Engraving, steel and copper plate..	1	Furs, dressed.....	1

## CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

1	ABILENE.....	18	139	14	12	5	1	107	De 120	Jy 90	140	123	17	.....	.....	\$507,341
2	AMARILLO.....	30	429	43	26	41	8	311	Aug 323	Je 278	322	308	14	.....	.....	1,094,143
3	AUSTIN.....	114	1,182	119	93	93	16	891	Mh 952	Aug 853	952	887	61	4	.....	2,956,609
4	BEAUMONT.....	67	1,335	45	78	128	11	1,078	Fe 1,195	My 991	1,098	1,078	12	8	.....	4,940,050
5	BROWNSVILLE.....	14	102	12	7	7	.....	70	Aug 89	Fe 63	80	80	1	5	.....	250,064
6	CLEBURNE.....	26	1,037	22	40	78	11	880	De 930	Aug 827	966	932	33	1	.....	1,463,075
7	DENISON.....	30	1,109	31	15	98	11	954	So 1,154	My 773	1,006	1,043	41	12	.....	1,052,106
8	GALVESTON.....	116	1,847	111	67	211	48	1,410	So 1,487	Apr 1,345	1,427	1,270	135	13	.....	7,210,345
9	LAREDO.....	28	326	32	7	10	1	270	My 300	De 245	284	284	.....	.....	.....	333,275
10	MARSHALL.....	28	1,296	18	66	41	5	1,106	No 1,211	Je 1,104	1,253	1,246	6	1	.....	2,039,945
11	PALESTINE.....	20	704	10	10	22	5	648	Oct 800	My 386	777	762	7	8	.....	905,838
12	PARIS.....	42	643	38	39	45	8	513	Fe 594	Je 462	540	460	72	2	.....	1,687,150
13	SAN ANGELO.....	30	225	33	16	8	7	161	Je 170	Fe 142	178	169	7	2	.....	380,338
14	SHERMAN.....	36	542	27	44	68	14	889	Jy 453	Oct 327	419	353	50	5	2	2,968,280
15	TEMPLE.....	37	454	37	20	37	9	342	So 415	Mh 288	395	367	28	.....	.....	1,701,536
16	TEXARKANA.....	20	1,073	18	44	46	10	655	My 1,079	Oct 818	1,001	1,023	22	16	.....	1,951,684
17	TYLER.....	20	692	18	36	30	2	506	Apr 526	Jan 472	537	461	66	8	2	685,764
18	WACO.....	125	1,593	108	86	171	13	1,125	Jan 1,210	My 1,063	1,214	1,054	140	11	.....	3,964,126
19	WICHITA FALLS.....	31	500	25	30	61	4	377	Jun 430	My 333	451	432	3	16	.....	2,356,789

1 Owned power only.

2 Includes rented power, other than electric.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal-combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>	Electric (rented).	

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

\$453,220	\$612,701	\$2,411,750	\$58,405	\$88,808	\$510,914	\$9,039,056	\$450,558	\$17,849,240	\$7,759,626	8,859	7,122	415	80	1,242	470	1
2,100	1,272	36,347	.....	5,160	232	26,250	875	82,018	55,793	38	.....	10	.....	28	.....	2
7,016	12,412	394,543	1,225	4,760	3,539	345,564	14,153	610,224	250,502	114	.....	.....	.....	114	.....	3
.....	.....	.....	.....	.....	640	362,077	49,722	840,129	427,730	139	139	.....	.....	.....	.....	4
5,500	7,892	59,692	.....	2,744	727	178,806	2,098	302,767	121,863	30	.....	.....	.....	30	.....	5
3,000	3,005	12,944	.....	2,651	802	158,442	1,892	206,570	40,236	46	.....	.....	.....	46	.....	6
18,120	45,693	88,051	.....	10,920	4,982	397,868	7,786	693,530	237,876	140	66	8	.....	66	.....	7
14,120	44,262	67,515	.....	8,700	4,523	323,018	6,111	578,200	244,131	106	66	8	.....	32	.....	8
4,000	1,431	20,536	.....	2,220	459	69,850	1,675	115,270	43,745	34	.....	.....	.....	34	.....	9
.....	1,000	53,633	715	4,550	588	71,143	619	175,340	103,578	15	.....	.....	.....	15	.....	10
25,300	42,116	194,734	11,708	1,135	5,511	543,463	10,208	970,045	422,374	423	103	100	.....	70	.....	11
17,133	11,043	63,090	4,755	1,240	6,391	19,775	72,417	271,020	178,828	913	910	3	.....	6	.....	12
.....	.....	10,000	.....	1,314	75	10,500	334	32,425	21,591	6	.....	.....	.....	.....	.....	13
23,096	17,816	104,763	.....	955	2,067	347,006	4,470	549,383	197,907	484	435	34	.....	15	.....	14
3,795	3,600	39,533	3,715	590	1,055	40,562	2,161	123,662	80,939	125	.....	100	.....	16	.....	15
.....	.....	12,800	.....	740	617	40,153	485	66,166	25,528	45	.....	.....	.....	45	.....	16
4,820	1,175	12,409	.....	1,152	630	61,251	454	121,579	59,374	17	4	.....	.....	13	.....	17
30,114	15,522	60,667	.....	1,000	6,203	1,034,438	25,383	1,265,073	205,252	910	910	.....	.....	.....	.....	18
1,200	1,303	1,165	1,800	525	26	7,980	60	26,848	18,808	5	.....	.....	.....	5	.....	19
9,030	42,544	23,109	388	540	1,094	258,839	2,147	495,810	344,824	71	20	.....	.....	51	.....	20
44,783	55,095	131,325	1,131	19,229	4,335	143,905	6,810	431,949	331,534	182	.....	.....	.....	182	.....	21
30,346	132,027	173,285	14,499	9,903	5,518	176,382	8,770	951,430	706,272	216	.....	4	.....	212	.....	22
31,756	122,467	151,459	3,047	7,350	5,393	163,090	7,749	850,146	679,307	183	.....	4	.....	179	.....	23
3,300	3,280	21,826	320	2,085	113	11,492	1,017	59,240	46,731	33	.....	.....	.....	33	.....	24
1,200	6,280	.....	11,132	468	12	1,800	10	42,044	40,234	.....	.....	.....	.....	.....	.....	25
.....	21,760	32,281	.....	1,278	15,461	74,834	.....	156,966	82,162	.....	.....	.....	.....	.....	.....	26
.....	.....	7,311	.....	1,200	237	6,128	42	13,337	7,167	2	.....	.....	.....	2	.....	27
214,970	105,680	794,840	18,469	17,132	454,986	5,333,300	230,061	9,406,039	3,832,988	4,933	4,445	87	80	326	470	28

Gas, illuminating and heating.....	3	Photo-engraving.....	1	Slaughtering and meat packing.....	3	Structural ironwork, not made in steel works or rolling mills.....	2
Hand stamps.....	1	Refrigerators.....	2	Soap.....	1	Vinegar.....	1
Liquors, malt.....	5	Saddlery and harness.....	1	Statuary and art goods.....	1	Wirework.....	1
Paints.....	2	Sand-lime brick.....	1	Stencils and brands.....	1		
Petroleum, refining.....	1						

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

\$12,270	\$3,376	\$68,840	\$2,500	\$1,434	\$2,903	\$151,380	\$14,030	\$311,346	\$145,930	502	215	35	.....	252	.....	1
29,227	40,496	254,881	526	12,805	6,876	467,645	41,803	986,087	476,639	1,791	1,034	65	.....	692	79	2
102,482	95,104	611,452	81,808	36,417	29,808	1,577,727	136,138	3,370,974	1,657,109	4,824	3,365	583	.....	876	216	3
133,162	148,119	673,830	8,950	20,804	46,177	3,357,156	85,105	5,191,055	1,748,794	5,680	4,834	81	.....	665	266	4
11,260	5,240	25,472	3,475	2,704	2,180	59,540	14,539	167,136	93,057	486	450	.....	.....	36	10	5
58,573	79,274	654,008	.....	4,654	13,152	1,257,941	101,140	2,246,263	887,182	1,541	429	6	.....	1,106	3	6
28,752	105,523	608,582	814	7,883	13,499	1,100,879	73,773	2,068,788	894,136	3,052	1,395	172	.....	2,085	50	7
196,779	238,525	954,654	21,199	44,201	114,071	5,514,261	201,590	8,691,969	2,976,118	8,939	5,894	372	.....	2,673	205	8
12,190	9,247	104,605	200	3,180	5,959	118,673	25,072	344,811	201,066	630	191	140	.....	199	.....	9
93,631	40,126	691,227	770	6,184	5,951	1,007,877	57,347	2,099,355	1,033,631	1,063	1,320	515	.....	128	703	10
15,796	21,939	504,265	5,648	2,345	8,222	522,703	61,393	1,222,160	638,064	1,302	1,223	.....	.....	74	90	11
54,885	46,352	271,892	741	11,167	15,039	1,491,656	46,762	2,283,875	745,457	2,220	1,914	73	.....	233	6	12
22,673	6,722	104,386	1,475	5,730	2,436	235,051	31,086	499,148	232,111	937	710	23	.....	204	18	13
78,455	91,068	220,780	9,816	7,887	27,086	5,800,330	63,704	7,027,747	1,163,713	2,366	1,862	167	.....	337	169	14
44,215	40,598	236,681	1,921	7,458	15,360	803,011	65,272	1,451,925	493,042	1,566	1,247	.....	.....	319	105	15
60,035	49,937	513,687	455	5,233	12,808	1,023,892	90,639	1,994,009	879,478	2,669	2,120	238	.....	311	18	16
50,222	27,580	313,371	50	5,297	12,012	418,075	30,573	896,549	447,901	1,332	1,232	10	.....	90	494	17
138,243	140,351	698,585	11,459	50,987	35,913	3,445,854	137,336	5,611,737	2,028,547	5,452	3,805	295	.....	1,352	257	18
66,644	72,491	254,337	44,500	5,770	9,663	1,886,426	28,672	2,672,785	657,637	2,085	1,800	198	.....	87	.....	19

<sup>1</sup> Same number reported for one or more other months.<sup>2</sup> Same number reported throughout the year.

# UTAH.

By WILLIAM S. WAUDBY.

## GENERAL STATISTICS.

**General character of the state.**—Utah was admitted to the Union as a state in 1896. With a gross area of 84,990 square miles, of which 82,184 represent land surface, it ranks tenth in size among the states. In 1914 there were in Utah 52,745 square miles of unappropriated and unreserved public lands of the United States, 12,444 square miles in national forests, and 280 square miles in Indian reservations. At the census of 1900 the population was 276,749; at the census of 1910, 373,351; and the estimated population in 1914 was 415,000. In total population Utah ranked forty-first among the states in 1910; and in density of population it ranked forty-second, with 4.5 inhabitants per square mile, the corresponding figure for 1900 being 3.4.

The urban population in 1910—that is, the population residing in cities and towns of 2,500 inhabitants or more—was 172,934, or 46.3 per cent of the total, as against 38.1 per cent in 1900. There were in the state in 1914 three cities each of which had a population estimated at more than 10,000: Ogden, Provo, and Salt Lake City. These cities, whose aggregate population in that year formed 35.9 per cent of the estimated total population of Utah, reported 27 per cent of the state's manufactured products.

The steam-railway mileage in 1914, as reported by the Interstate Commerce Commission, was 2,098, and the electric-railway mileage in 1912 (the latest year for which figures are available) was 190.

Utah is largely a mining and agricultural state, although its manufacturing interests have a rapidly increasing share in its wealth. According to the

report of the United States Geological Survey the total mineral output of the state for 1914 was valued at \$45,624,698, the principal products being copper \$20,220,522, lead \$6,681,602, silver \$6,168,669, and coal \$4,935,454. The total value of farm crops in 1909 was \$18,484,615, of which \$6,043,294, or about one-third, represented the value of wheat, oats, corn, and barley. The state is without navigable rivers or lakes, but the great flow of water from the various mountain streams is utilized in the generation of electric power and in mining and irrigation. Among the industries dependent upon agriculture and horticulture are flour milling, the canning of fruits and vegetables, and the manufacture of beet sugar, and of butter, cheese, and condensed milk. Those deriving their raw materials from the mines are lead and copper smelting and the production of coke and salt.

**Importance and growth of manufactures.**—The manufacturing industries of Utah in 1914 turned out products valued at \$87,112,360 and gave employment to 13,894 wage earners. Measured by the former standard, Utah ranked fortieth among the states in 1904, thirty-ninth in 1909, and thirty-fifth in 1914; and measured by the latter its rank was fortieth in each year. The state's proportion of the total value of manufactures in the United States at each census was three-tenths of 1 per cent.

Table 1 summarizes the more important data relative to all classes of manufactures combined in the state of Utah, for the censuses of 1914, 1909, 1904, and 1899, and gives the percentages of increase from census to census.

	MANUFACTURING INDUSTRIES.				PER CENT OF INCREASE.		
	1914	1909	1904	1899	1909-1914	1904-1909	1899-1904
Number of establishments.....	1,109	749	606	575	48.1	23.6	5.4
Persons engaged.....	17,126	14,133	9,650	(1)	21.2	46.5	.....
Proprietors and firm members.....	999	688	619	(1)	45.2	11.1	.....
Salaried employees.....	2,233	1,660	979	590	34.5	60.0	68.4
Wage earners (average number).....	13,894	11,785	8,052	5,413	17.9	40.4	48.8
Primary horsepower.....	50,536	42,947	19,307	12,674	38.6	121.4	53.0
Capital.....	\$71,843,168	\$52,026,640	\$26,004,011	\$13,219,039	36.5	102.4	96.7
Salaries and wages.....	13,695,957	10,366,053	6,165,753	3,263,134	32.1	67.3	89.9
Salaries.....	2,843,625	1,966,410	1,038,353	500,612	44.6	89.4	107.4
Wages.....	10,852,332	8,399,634	5,127,400	2,762,522	29.6	62.9	80.7
Paid for contract work.....	277,062	104,176	70,186	(1)	166.5	48.4	.....
Rent and taxes (including internal revenue).....	986,404	681,230	232,397	(1)	44.2	.....	.....
Cost of materials.....	62,233,180	41,205,601	24,939,827	11,440,250	50.8	65.5	118.0
Value of products.....	87,112,360	61,989,277	38,926,464	17,981,648	40.6	59.2	116.5
Value added by manufacture (value of products less cost of materials).....	24,879,180	20,723,616	13,986,637	6,541,398	20.1	48.2	113.8

<sup>1</sup> Figures not available.

<sup>2</sup> Exclusive of internal revenue.

The manufacturing activities of the state show substantial increases from census to census in all items covered by the table, but the relative gain has been less at each successive five-year period. The progress

of manufactures is best measured by the number of persons employed and the value of the products. The average number of wage earners increased 17.9 per cent from 1909 to 1914, as compared with 46.4 per cent



and 48.8 per cent, respectively, for the two preceding five-year periods. In value of products the rate of increase was 40.5 per cent for the period from 1909 to 1914, 59.2 per cent from 1904 to 1909, and 116.5 per cent from 1899 to 1904. The percentages of increase shown for Utah are considerably in excess of the

corresponding percentages for the United States as a whole.

Table 2 shows the relative importance of the leading manufacturing industries in 1914 and gives percentages of increase for the three five-year periods from 1899 to 1914.

Table 2

Table 2	CENSUS OF 1914.							PER CENT OF INCREASE. <sup>1</sup>								
	Number of establishments.	Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.		
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1900-1914	1904-1909	1899-1904	1900-1914	1904-1909	1899-1904	1900-1914	1904-1909	1899-1904
All industries.....	1,109	13,894	100.0	\$87,112,300	100.0	\$24,870,180	100.0	17.9	46.4	48.8	40.5	50.2	116.5	20.1	48.2	113.8
Smelting, lead.....	3	1,882	13.5	21,762,102	25.0	3,045,872	14.8									
Cars and general shop construction and repairs by steam-railroad companies.....	8	2,193	15.8	3,574,801	4.1	2,069,387	8.3	26.7	38.7	37.4	30.5	45.2	44.4	36.6	42.9	51.0
Flour-mill and gristmill products.....	70	198	1.4	3,155,513	3.6	518,106	2.1	7.0	22.7	0.7	0.8	20.1	46.2	-16.3	61.9	4.1
Slaughtering and meat packing.....	14	138	1.0	3,010,678	3.5	338,712	1.4				78.2	158.8	44.2	-0.6	141.2	104.4
Printing and publishing.....	106	872	0.3	2,780,000	3.2	1,899,701	7.6	-9.8	77.4	-3.2	15.6	57.9	91.6	13.0	40.4	103.4
Canning and preserving.....	37	677	4.0	2,420,804	2.8	760,403	3.1	71.0			120.5			121.9		
Butter, cheese, and condensed milk.....	37	261	1.9	2,208,153	2.0	407,084	1.6	23.4			16.6			13.7		
Confectionery.....	31	617	4.4	2,125,088	2.4	861,899	3.5	5.3	74.9	119.0	8.9	94.2	149.4	30.4	108.5	62.6
Lumber and timber products.....	130	748	5.4	1,504,082	1.7	912,234	3.8	73.6	136.8	-49.0	53.9	192.5	-23.9	73.8	177.9	-28.6
Foundry and machine-shop products.....	48	530	3.8	1,501,591	1.7	683,434	2.7	42.1			62.9			32.8		
Bread and other bakery products.....	86	306	2.2	1,370,225	1.6	571,066	2.3	8.5	47.6	78.5	12.9	124.0	86.3	22.3	78.9	75.2
Liquors, malt.....	5	204	1.5	1,345,771	1.5	990,673	4.0	14.6	32.8		-0.8	113.0	47.1	-0.6	131.5	47.8
Cement.....	3	267	1.9	1,233,321	1.4	702,110	3.1									
Marble and stone work.....	23	349	2.5	858,951	1.0	734,219	3.0	188.4			218.1	164.7	50.0	310.1	171.2	73.7
Brick and tile.....	27	438	3.2	625,186	0.7	502,509	2.0	-28.2	87.7	30.5	-28.8	107.6	90.7	-26.7	110.1	85.2
Gas, illuminating and heating.....	4	208	1.5	616,848	0.7	337,482	1.4	24.6			68.6	128.8		70.7	54.7	
Hosiery and knit goods.....	11	183	1.3	528,325	0.0	245,051	1.0	5.2	1.8		26.0	28.5	393.9	92.0	-20.1	278.6
Leather goods.....	53	134	1.0	508,808	0.0	189,540	0.8	16.5			19.5	91.9		13.8	45.2	
Confectionery (ice cream).....	28	145	1.0	400,084	0.6	204,205	0.8									
Copper, tin, and sheet-iron work.....	2 50	123	0.9	384,833	0.4	231,657	0.9									
Salt.....	7	92	0.7	287,032	0.3	208,114	0.8									
All other industries.....	202	3,320	23.9	34,730,065	39.0	7,728,000	31.1				50.5	-22.4	70.5	58.8	-20.6	73.8

<sup>1</sup> Percentages are based on figures in Table 28; a minus sign (-) denotes decrease; percentages are omitted where base is less than 100, or when comparable figures can not be given.

<sup>2</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.

Separate statistics are presented for 21 industries, or industry groups, for each of which products valued at more than \$280,000 were reported for 1914. These industries include 4 with products exceeding \$3,000,000 in value, 4 with products between \$2,000,000 and \$3,000,000, 5 with products between \$1,000,000 and \$2,000,000, and 8 with products valued at less than \$1,000,000. Among those included under the head of "all other industries," the statistics for which can not be shown separately without the possibility of disclosing the operations of individual establishments, are some which had products exceeding in value those of certain industries for which figures are shown in the table. These industries comprise the production of coke, the smelting of copper, and the manufacture of beet sugar. Copper smelting and the manufacture of beet sugar in Utah not only are important industries in the state but contribute a considerable part of the total production of these two industries in the United States.

The industries in this table are arranged in the order of their importance as measured by value of products, but the arrangement would vary considerably if based on the average number of wage earners or value added by manufacture. The smelting of lead, which ranked first in value of products and value added by

manufacture, was second in number of wage earners. The steam-railroad repair shops, second in value of products and value added by manufacture, ranked first in average number of wage earners. The flour-mill and gristmill industry, although third in value of products, held only fifteenth place in average number of wage earners and twelfth in value added by manufacture. This industry consists largely of the simple process of grinding grain, requiring few employees, and the value added to the raw material by manufacture is relatively small. Similarly, slaughtering and meat packing, while fourth in value of products, occupied eighteenth place in number of wage earners and fifteenth in value added by manufacture. The manufacture of butter, cheese, and condensed milk, another industry which requires comparatively few employees and adds relatively little value by the manufacturing process, while seventh in value of products, was twelfth in average number of wage earners and fourteenth in value added by manufacture. On the other hand, printing and publishing, fifth in value of products, was third in number of wage earners and in value added by manufacture, and the malt-liquor industry, ranking twelfth in value of products and fourteenth in number of wage earners, was fourth in value added by manufacture. The

relatively high rank of this industry in value added by manufacture is due to the fact that this item (which represents the difference between value of products and cost of materials) includes the amount of internal-revenue taxes paid by the brewers, not included in the cost of materials, in addition to the value actually added by the manufacturing process.

In rank according to value of products the figures for 1914 show many changes as compared with those for 1909, due to the fact that statistics for the smelting of lead, one of the most important industries in the state, have not been presented separately for the years prior to 1914. Of the more important industries shown in the table, the railroad car shops continue to rank second; the flour-mill and gristmill industry dropped from first to third place; slaughtering and meat packing advanced to fourth place; and canning and preserving to sixth; while printing and publishing and the manufacture of butter, cheese, and condensed milk, industries ranking fifth and seventh, respectively, in 1914 were third and fourth, respectively, in 1909. For the remainder of the industries slight changes are noticeable from census to census.

*Smelting lead.*—In 1914 the lead smelted in Utah, according to the report of the Geological Survey, amounted to 88,976 tons, or one-sixth of the total for the United States, the state ranking third in output of this mineral. The importance of lead smelting in its connection with manufactures may be more fully appreciated when it is considered that in 1914 the industry gave employment to an average of 1,882 wage earners, or 13.5 per cent of the average number for all industries combined in the state, and that the value of its products, amounting to \$21,752,102, was 25 per cent of the total. It should be understood, however, that the value of the products shown for the industry includes the value of the precious metals extracted in connection with the smelting of the lead ore.

*Cars and general shop construction and repairs by steam-railroad companies.*—This industry represents the work done in car shops of steam-railroad companies, which is practically limited to repairs to the rolling stock and equipment of the companies reporting. During the five-year period 1909–1914 the average number of wage earners increased by 26.7 per cent and the value of products by 30.5 per cent.

*Flour-mill and gristmill products.*—This industry is exclusive of custom mills grinding for toll or local consumption. During the five-year period 1909–1914 there was an increase of 7.6 per cent in the average number of wage earners, but the value of products increased by only eight-tenths of 1 per cent.

*Slaughtering and meat packing.*—This classification includes wholesale slaughtering and meat-packing establishments only. During the five-year period

1909–1914 there was an increase of 78.2 per cent in value of products but a decrease of 6.6 per cent in value added by manufacture. The latter item, which has always been relatively small for this industry, represented only 11.2 per cent of the total value of products in 1914.

*Printing and publishing.*—Included in this industry are the establishments engaged in bookbinding and blank-book making; engraving, steel and copper plate, including plate printing; lithographing; printing and publishing, book and job; and the printing and publishing of newspapers and periodicals. During the five-year period 1909–1914 the value of products increased by 15.6 per cent but the average number of wage earners decreased by 9.8 per cent.

*Canning and preserving.*—This industry in Utah in 1914 included 31 establishments engaged in canning and preserving fruits and vegetables and 6 producing pickles, preserves, and sauces. The value of products for that year shows an increase of 129.5 per cent over the value reported for 1909, and during the same period the average number of wage earners increased by 71 per cent.

*Butter, cheese, and condensed milk.*—This industry does not include products made on farms. From 1909 to 1914 the value of products increased by 16.6 per cent and the average number of wage earners by 23.4 per cent.

*Persons engaged in manufacturing industries.*—Table 3 shows, for 1909 and 1914, the number of persons engaged in manufactures, distributed by sex, the average number of wage earners being distributed also by age. The sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the "Explanation of terms."

Table 3

CLASS.	Census year.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.				
		Total.	Male.	Female.	Per cent of total.	
					Male.	Female.
All classes.....	1914 1909	17,126 14,133	15,143 12,680	1,983 1,453	88.4 89.7	11.6 10.3
Proprietors and officials.....	1914 1909	1,738 1,221	1,686 1,195	52 26	97.0 97.9	3.0 2.1
Proprietors and firm members..	1914 1909	999 688	968 673	31 15	96.9 97.8	3.1 2.2
Salaried officers of corporations..	1914 1909	102 135	184 132	8 3	95.8 97.8	4.2 2.2
Superintendents and managers..	1914 1909	547 398	534 390	13 8	97.6 98.0	2.4 2.0
Clerks and other subordinate salaried employees.	1914 1909	1,494 1,127	1,298 923	196 204	86.9 81.9	13.1 18.1
Wage earners (average number)....	1914 1909	13,894 11,785	12,159 10,502	1,735 1,223	87.5 89.6	12.5 10.4
16 years of age and over.....	1914 1909	13,687 11,675	12,081 10,470	1,656 1,205	87.9 89.7	12.1 10.3
Under 16 years of age.....	1914 1909	207 110	128 92	79 18	61.8 83.6	38.2 16.4

The manufacturing industries of Utah gave employment in 1914 to 17,126 persons, of whom 13,894, or more than four-fifths, were wage earners, 1,738 were proprietors and officials, and 1,494 were clerks and other subordinate salaried employees. Of the wage earners 16 years of age and over, 12,031, or about seven-eighths, were males and 1,656, or about one-eighth, were

females. Figures for the sex and age distribution of wage earners for individual industries will be found in Table 29.

Table 4 gives, for the several classes of persons engaged in manufactures, the percentages of increase from 1909 to 1914 and the per cent distribution at the two censuses.

Table 4

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
	Per cent of increase, <sup>1</sup> 1909-1914.			Per cent distribution.					
	Total.	Male.	Female.	Total.		Male.		Female.	
				1914	1909	1914	1909	1914	1909
All classes.....	21.2	10.4	30.5	100.0	100.0	100.0	100.0	100.0	100.0
Proprietors and officials.....	42.3	41.1	.....	10.1	8.0	11.1	9.4	2.0	1.8
Proprietors and firm members.....	45.2	43.8	.....	5.8	4.9	0.4	5.3	1.6	1.0
Salaried officers of corporations.....	42.3	39.4	.....	1.1	0.9	1.2	1.0	0.4	0.2
Superintendents and managers.....	37.4	36.0	.....	3.2	2.8	3.5	3.1	0.6	0.6
Clerks and other subordinate salaried employees.....	32.0	40.6	-3.0	8.7	8.0	8.6	7.3	9.0	14.0
Wage earners (average number).....	17.0	15.1	41.0	81.1	83.4	80.3	83.3	87.5	84.2
16 years of age and over.....	17.2	14.9	37.4	79.0	82.6	79.4	82.6	83.5	82.0
Under 16 years of age.....	88.2	.....	.....	1.2	0.8	0.9	0.7	4.0	1.3

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100.

During the five-year period 1909-1914 there was an increase in each of the several classes of employees. In 1914 wage earners formed a somewhat smaller proportion of the total number of persons engaged in manufactures than in 1909. Of the 13,894 wage earners, 1.4 per cent were under 16 years of age in 1914, as against nine-tenths of 1 per cent in 1909.

In order to compare the distribution of persons engaged in manufactures in 1914 with that shown in the census of 1904, it is necessary to use the classification employed at the earlier census. (See "Explanation of terms.") Table 5 makes this comparison according to occupational status.

Table 5

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
	Number.			Per cent distribution.			Per cent of increase.		
	1914	1909	1904	1914	1909	1904	1909-1914	1904-1909	
Total.....	17,126	14,133	9,650	100.0	100.0	100.0	21.2	40.5	
Proprietors and firm members.....	990	688	619	5.8	4.9	6.4	45.2	11.1	
Salaried employees.....	2,233	1,600	979	13.0	11.7	10.1	34.5	60.6	
Wage earners (average).....	13,894	11,785	8,052	81.1	83.4	83.4	17.9	40.4	

Each of the three classes for which figures are given in this table shows increases for both five-year periods. The increase for the decade for all persons engaged in manufacturing amounted to 77.5 per cent.

The average number of wage earners employed and their per cent distribution as males 16 years of age and over, females 16 years of age and over, and children under 16 years of age, are given in Table 6 for 1914, 1909, and 1904. The table also shows, for some of the important industries separately, a similar distribution of wage earners for 1914 and 1909.

Table 6

INDUSTRY.	Census year.	WAGE EARNERS.			
		Average number. <sup>1</sup>	Per cent of total.		
			16 years of age and over.		Under 16 years of age.
			Male.	Female.	
All industries.....	1914	13,894	86.6	12.0	1.4
	1909	11,785	84.8	10.2	0.9
	1904	8,052	84.9	12.0	2.4
Bread and other bakery products.....	1914	306	81.7	17.3	1.0
	1909	282	81.9	17.4	0.7
Brick and tile.....	1914	438	96.8	.....	3.2
	1909	610	95.2	.....	4.8
Butter, cheese, and condensed milk.....	1914	204	83.3	16.7	.....
	1909	214	84.0	15.4	.....
Canning and preserving.....	1914	677	35.0	53.2	11.2
	1909	396	39.1	55.3	5.6
Cars and general shop construction and repairs by steam-railroad companies.....	1914	2,193	99.9	0.1	.....
	1909	1,731	100.0	.....	.....
Confectionery.....	1914	617	27.3	69.4	3.4
	1909	580	30.2	69.1	0.7
Flour-mill and gristmill products.....	1914	198	99.0	.....	1.0
	1909	184	100.0	.....	.....
Foundry and machine-shop products.....	1914	530	99.2	.....	0.8
	1909	373	100.0	.....	.....
Lumber and timber products.....	1914	748	97.2	2.5	0.3
	1909	431	98.6	0.9	0.5
Printing and publishing.....	1914	872	80.9	14.7	4.4
	1909	967	84.4	13.3	2.3
Smelting, lead.....	1914	1,882	99.9	.....	0.1
	1909	.....	.....	.....	.....
All other industries.....	1914	5,169	87.1	12.0	0.9
	1909	6,011	93.4	6.1	0.5

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number for all industries combined, see "Explanation of terms."

Between 1904 and 1909 the percentage of male wage earners 16 years of age and over increased materially, while the proportions of both women and children decreased. During the succeeding five-

year period a change in the opposite direction, although less pronounced, took place, with the result that the percentage of men in 1914 was greater than in 1904 but less than in 1909, while the proportions of women and children in 1914 were smaller than in 1904 but greater than in 1909.

Male wage earners predominate in each of the industries shown in Table 6, except in canning and preserving and in the manufacture of confectionery, for which the proportions of female wage earners in 1914 were 53.2 per cent and 69.4 per cent, respectively—nearly the same as in 1909. These two industries also show comparatively large proportions of wage earners under 16 years of age, that for canning and preserving being by far the largest—11.2 per cent. Relatively large proportions of this class also appear for the brick and tile industry and for printing and publishing.

Table 7 shows the average number and the per cent distribution of wage earners employed in each of the three cities having more than 10,000 inhabitants, classified according to age periods, and in the case of those 16 years of age and over, according to sex, for 1914, 1909, and 1904.

SEX AND AGE.	Census year.	AVERAGE NUMBER OF WAGE EARNERS IN—		
		Ogden.	Provo.	Salt Lake City.
Total.....	1914	1,894	330	4,931
	1909	1,323		4,287
	1904	1,013		2,776
16 years of age and over:				
Male.....	1914	1,458	198	4,029
	1909	1,057		3,506
	1904	841		2,289
Female.....	1914	388	127	820
	1909	282		677
	1904	136		443
Under 16 years of age.....	1914	48	5	82
	1909	4		44
	1904	36		44
Per cent of total:				
16 years of age and over—				
Male.....	1914	77.0	60.0	81.7
	1909	79.9		83.2
	1904	83.0		82.5
Female.....	1914	20.5	38.5	18.0
	1909	19.8		15.8
	1904	13.4		10.0
Under 16 years of age.....	1914	2.5	1.5	1.7
	1909	0.3		1.0
	1904	3.6		1.5

The proportion of female wage earners in each of the three cities in 1914 was considerably greater than for the state as a whole, the largest percentage, 38.5, being shown for Provo, in which city over seven-eighths of the female wage earners were reported by three industries—canning and preserving, the manufacture of confectionery, and printing and publishing. From 1909 to 1914 there were increases in each of the three classes of wage earners in Ogden and Salt Lake City, but in the case of Provo figures for earlier years are not available.

**Wage earners employed, by months.**—The following table gives, for all industries combined, the total num-

ber of wage earners employed on the 15th of each month, or the nearest representative day, for 1914 and 1909, and the average number employed during each month in 1904, together with the percentage which the number reported for each month forms of the greatest number reported for any month.

MONTH.	WAGE EARNERS IN MANUFACTURING INDUSTRIES.					
	Number. <sup>1</sup>			Per cent of maximum.		
	1914	1909	1904	1914	1909	1904
January.....	13,035	11,412	6,261	82.5	86.0	62.1
February.....	12,382	10,449	6,112	78.4	78.7	60.6
March.....	12,578	10,594	6,533	79.6	79.8	64.8
April.....	13,101	10,830	7,533	82.9	81.6	74.7
May.....	13,386	10,749	7,882	84.8	81.0	78.1
June.....	14,262	11,808	8,558	90.3	89.4	82.9
July.....	15,401	12,436	8,000	97.5	93.7	85.9
August.....	14,993	12,234	8,972	94.9	92.1	89.0
September.....	15,794	13,277	10,086	100.0	100.0	100.0
October.....	15,525	13,070	9,842	98.3	98.4	97.6
November.....	13,334	12,445	8,494	84.4	93.7	84.2
December.....	12,937	12,053	7,891	81.9	90.8	78.2

<sup>1</sup> The figures for 1914 and 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during the month.

At each of the three censuses shown in the table, the period of greatest activity in manufacturing was the late summer and autumn, the maximum being reported each year for September. The year 1909 shows the least fluctuation from month to month in the number of wage earners employed, but in 1914 the variation was only a trifle greater. The greatest difference between the maximum and the minimum months in any one of the three years was 3,974 in 1904.

Table 9 gives the total average number of wage earners employed during 1914, together with the total number employed on the 15th of each month, or the nearest representative day, for the combined industries of the state, for a number of selected industries, and for the total industries of each of the three cities having more than 10,000 inhabitants.

The 13 industries shown separately in the table vary considerably as to the maximum and the minimum months of employment. The figures reported reflect a fair stability of employment in all industries except those which are seasonal in character. The canning season lasts only about four months—from July to October—reaching its maximum in September. The number of wage earners employed in January and February, the minimum months, represent only 4.2 per cent of the number employed in the maximum month. Brick and tile and the lumber industry show wide variations between their periods of greatest and least activity, the percentages which the minimum forms of the maximum being 43.5 and 54.6, respectively. The manufacture of beet sugar is another seasonal industry, in which (although separate statistics for this industry can not be given without disclosing the operations of individual establishments) the maximum and the minimum months of employment were October and March, respectively.

Table 9

WAGE EARNERS: 1914.														
[Month of maximum employment for each industry is indicated by <b>boldface</b> figures and that of minimum by <i>italic</i> figures.]														
Average number employed during year.	Number employed on 15th day of the month or nearest representative day.												Per cent minimum is of maximum.	
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		
13,894	13,035	<i>12,388</i>	12,578	13,101	13,380	14,262	15,401	14,003	<b>15,794</b>	15,525	13,334	12,037	78.4	
306	301	298	<i>299</i>	303	<b>318</b>	312	305	310	313	303	306	307	93.1	
438	276	<i>275</i>	343	471	540	633	500	533	515	422	368	305	43.4	
264	242	244	<i>241</i>	207	284	291	264	266	265	271	278	255	82.8	
677	97	<i>97</i>	127	148	176	582	1,556	1,277	<b>2,286</b>	1,433	233	112	4.2	
2,193	<b>2,282</b>	2,183	2,257	2,101	<i>2,095</i>	2,128	2,234	2,208	2,103	2,270	2,155	2,141	91.8	
617	505	549	548	557	<i>542</i>	580	638	623	602	<b>773</b>	670	658	70.1	
198	202	201	190	185	181	101	178	107	214	217	210	210	82.0	
530	503	545	494	526	555	545	574	582	542	497	482	<i>455</i>	78.2	
204	170	187	100	207	212	238	<b>244</b>	230	218	187	<i>160</i>	181	68.0	
748	<i>548</i>	573	567	594	588	827	787	844	870	<b>1,003</b>	881	885	54.6	
340	<i>228</i>	208	306	351	303	300	390	380	373	375	<b>391</b>	315	57.8	
872	809	808	873	874	882	870	852	<i>848</i>	862	876	886	<b>895</b>	94.7	
1,882	<b>2,123</b>	2,000	1,034	2,070	2,034	1,970	1,927	2,000	1,708	1,678	<i>1,482</i>	1,658	69.8	
4,610	4,562	<i>4,004</i>	4,143	4,387	4,610	4,717	4,883	4,695	4,734	<b>5,211</b>	4,820	4,580	78.0	
7,155	6,000	<i>6,574</i>	6,702	6,900	7,017	7,323	<b>7,556</b>	7,420	7,633	7,714	7,105	6,875	83.7	
1,894	1,098	1,770	1,784	1,820	1,703	1,932	<b>2,331</b>	1,974	2,235	2,101	1,724	<i>1,600</i>	67.2	
330	317	<b>308</b>	312	320	328	334	336	331	<b>367</b>	340	320	320	83.9	
4,931	4,651	<i>4,490</i>	4,606	4,757	4,809	5,057	5,189	5,124	5,031	<b>5,267</b>	5,115	4,983	85.4	

**Prevailing hours of labor.**—In Table 10 the average numbers of wage earners reported, for 1914 and 1909, for all industries combined and for selected industries throughout the state, have been classified according to number of hours of labor per week prevailing in the establishments in which they were employed. A

similar classification is given, for 1914 only, for all industries combined, in each city having more than 10,000 inhabitants. The number employed in each establishment is classified as a total, even though a few employees worked a greater or a smaller number of hours.

Table 10

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.							
		Total.	In establishments where the prevailing hours of labor per week were—						
			48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72. Over 72.
All industries.....	1914	13,894	3,977	1,011	2,168	3,331	1,826	1,226	18
	1909	11,785	2,093	874	2,072	3,545	1,182	1,210	400
Bread and other bakery products.....	1914	306	24	2	109	2	157	8	3
	1909	282	2	.....	9	61	178	28	2
Brick and tile.....	1914	438	195	.....	60	4	83	96	.....
	1909	610	253	23	91	10	161	72	.....
Butter, cheese, and condensed milk.....	1914	264	44	7	86	9	76	39	3
	1909	214	70	.....	6	7	13	109	.....
Canning and preserving.....	1914	677	72	21	150	35	393	.....	.....
	1909	396	85	.....	77	33	192	.....	9
Cars and general shop construction and repairs by steam-railroad companies.....	1914	2,193	790	.....	364	804	102	133	.....
	1909	1,731	.....	.....	1,027	.....	.....	704	.....
Confectionery.....	1914	617	12	199	381	2	2	20	1
	1909	589	67	70	123	37	285	3	1
Flour-mill and gristmill products.....	1914	198	9	.....	38	15	86	40	10
	1909	184	12	.....	8	5	101	39	18
Foundry and machine-shop products.....	1914	530	98	140	287	4	1	.....	.....
	1909	373	46	21	265	33	4	4	.....
Liquors, malt.....	1914	204	176	.....	28	.....	.....	.....	.....
	1909	178	141	37	.....	.....	.....	.....	.....
Lumber and timber products.....	1914	748	573	70	44	.....	53	8	.....
	1909	431	165	85	97	.....	75	9	.....
Marble and stone work.....	1914	340	339	4	6	.....	.....	.....	.....
	1909	121	59	5	30	21	.....	.....	.....
Printing and publishing.....	1914	872	812	22	31	2	5	.....	.....
	1909	967	438	253	60	198	7	2	.....
Smelting, lead.....	1914	1,882	.....	.....	.....	1,417	.....	465	.....
	1909	.....	.....	.....	.....	.....	.....	.....	.....
All other industries.....	1914	4,610	833	546	568	1,037	868	417	1
	1909	5,712	740	380	264	3,140	166	246	377
Total for cities.....	1914	7,155	2,805	1,060	1,532	759	695	256	8
OGDEN.....	1914	1,894	1,180	112	209	73	261	34	25
PROVO.....	1914	330	47	6	115	.....	154	3	5
SALT LAKE CITY.....	1914	4,931	1,578	942	1,208	686	280	219	3

The figures in this table, for all industries combined and for many of the selected industries, indicate a tendency toward the shortening of the working day. Almost the entire increase of 2,109 in the number of wage earners occurred in establishments operating 54 hours or less per week. Three of the five groups of establishments where the longer working day prevailed show a decrease in the number of wage earners employed. In 1909, 57.2 per cent of the wage earners in all manufactures combined were employed in establishments operating more than 54 hours per week, but the percentage for this class was reduced to 48.6 in 1914. The large number of wage earners shown for the group working between 54 and 60 hours per week in 1914 is accounted for in considerable part by the fact that these are the prevailing hours in the copper and lead smelting industries. (The figures for copper smelting, as previously explained, are not shown separately.)

Among the separate industries, the bakery and the canning and preserving industries were largely on the 60-hour basis, but these two industries also reported a

considerable number of wage earners in the 54-hour group in 1914. In the steam-railroad repair shops, the confectionery industry, and in the foundries and machine shops a majority of the wage earners were in establishments in which the prevailing hours were 54 or less per week. In the malt-liquor, lumber, marble and stone, and printing and publishing industries the majority of the wage earners were employed 48 hours and under.

Of the 7,155 wage earners in the three cities in 1914, 6,156, or 86 per cent, were in establishments where the prevailing hours were under 60 per week, while only 999, or 14 per cent, were in establishments where the hours were 60 or more per week. In Ogden and Salt Lake City establishments operating 48 hours and under reported more wage earners than any other group, but in Provo the 60-hour basis of work prevailed.

**Location of establishments.**—Table 11 shows, for 1914, 1909, and 1899, the extent to which manufactures in Utah were centralized in the cities having more than 10,000 inhabitants.

Table 11	Census year.	Aggregate.	CITIES HAVING A POPULATION OF 10,000 OR OVER.								DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 OR OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.			
			Number or amount.	Percent of aggregate.	Number or amount.	Percent of aggregate.	Number or amount.	Percent of aggregate.	Number or amount.	Percent of aggregate.	Number or amount.	Percent of aggregate.
Number of places.....	1914 1910 1900		3 2 2		1 1 1		1 2 1		1			
Population <sup>1</sup> .....	1914 1910 1900	414,518 373,351 276,749	149,355 118,357 69,844	36.0 31.7 25.2	10,091 16,313	2.4 5.9	29,523 118,357 53,531	7.1 31.7 19.3	109,736	26.5	265,163 254,924 206,905	64.0 68.3 74.8
Number of establishments.....	1914 1909 1899	1,109 749 575	509 313 205	45.9 41.7 35.7	33 51	3.0 8.9	110 313 154	9.9 41.8 26.8	366	33.0	609 436 370	54.1 58.2 64.3
Average number of wage earners.	1914 1909 1899	13,894 11,785 5,413	7,155 5,610 2,832	51.5 47.6 52.3	330 678	2.4 12.5	1,894 5,610 2,154	13.6 47.6 39.8	4,931	35.5	6,739 6,175 2,581	48.5 52.4 47.7
Value of products.....	1914 1909 1899	\$87,112,360 61,939,277 17,981,648	\$23,521,020 17,064,504 5,521,140	27.0 27.5 30.7	\$843,722 1,242,214	1.0 6.9	\$6,014,358 17,064,504 4,278,926	6.9 27.5 23.8	\$16,662,940	19.1	\$63,591,240 44,924,773 12,460,508	73.0 72.5 69.3
Value added by manufacture....	1914 1909 1899	24,879,180 20,723,616 6,541,398	10,908,621 8,384,056 2,865,094	43.8 40.5 43.8	332,349 562,767	1.3 8.6	2,446,707 8,384,056 2,302,327	9.8 40.5 35.2	8,129,565	32.7	13,970,559 12,339,560 3,676,304	56.2 59.5 56.2

<sup>1</sup> Census estimate of population for 1914.

In 1909 and in 1899 Ogden and Salt Lake City were the only cities in Utah having more than 10,000 inhabitants, and neither of these cities had a population of more than 100,000; but in 1914 Salt Lake City had advanced to the 100,000-and-over class and Provo to the 10,000-to-25,000 class. Comparisons of the 1914 figures with those for earlier years can not properly be made for the three cities taken as a group and for the districts outside, since the statistics for Provo were included with those for the outside districts for 1909 and 1904.

Table 11 shows that the increase in the manufactures of the state was general and extended to both urban and rural communities. In 1914 the three cities which constituted 35.9 per cent of the total population of the state reported 27 per cent of the

total value of products and 51.5 per cent of the total average number of wage earners, while the outside districts reported 73 per cent of the total value of products and 48.5 per cent of the total average number of wage earners. These unusually small proportions for the cities are accounted for largely by the fact that three of the most important industries of the state—the manufacture of sugar, the smelting of copper, and the smelting of lead—are conducted in establishments outside of the corporate limits of the cities.

The relative importance in manufactures of each of the three cities having a population of more than 10,000, as measured by average number of wage earners and by value of products, in 1914, 1909, and 1904 is shown in Table 12. The cities are listed in the order of their importance as shown by value of products.



No comparative figures for 1909 and 1904 are given for Provo, since that city had less than 10,000 inhabitants in those years.

CITY.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1914	1909	1904	1914	1909	1904
Salt Lake City.....	4,931	4,287	2,776	\$16,662,940	\$13,351,537	\$7,543,983
Ogden.....	1,894	1,323	1,013	6,014,358	5,712,957	2,507,057
Provo.....	330			813,722		

Of the total value of products for the three cities in 1914, Salt Lake City reported 70.8 per cent, Ogden 25.6 per cent, and Provo 3.6 per cent, and their proportions of the total average number of wage earners were 68.9 per cent, 26.5 per cent, and 4.6 per cent, respectively.

The manufactures of Salt Lake City and Ogden each show marked increases in both average number of wage earners and value of products for the two five-year periods 1904-1909 and 1909-1914.

The leading industries in Salt Lake City were printing and publishing, slaughtering and meat packing, and the bakery, confectionery and ice cream, foundry and machine-shop, and malt-liquor industries; in Ogden, the railroad repair shops, printing and publishing, slaughtering and meat packing, canning and preserving, and the manufacture of confectionery and of malt liquors; and in Provo, printing and publishing and the manufacture of confectionery, of foundry and machine-shop products, of lumber and timber products, and of woolen goods.

**Character of ownership.**—Table 13 presents statistics concerning the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined, for the state as a whole, comparative figures are given for 1914, 1909, and 1904; for selected industries, statistics for 1914 and 1909 are shown; and for individual cities the figures are for all industries combined and relate only to 1914. In order to avoid disclosing the operations of individual establishments, it is necessary to omit several important industries from this table.

Table 13		INDUSTRY AND CITY.	Cen- sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
							In establishments owned by—			Per cent of total.			Total.			Of establishments owned by—			Per cent of total.					
				Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Total.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Total.	Individ- uals.	Corpora- tions.	All others.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.				
All Industries.....	1914 1909 1904	472 298 237	300 204 203	247 157 140	13,894 11,785 8,052	895 980 704	12,233 9,998 6,544	793 801 744	6.4 8.4 9.5	88.0 84.8 81.3	5.5 6.8 9.2	\$87,112,360 61,989,277 38,920,464	\$3,423,648 3,194,702 2,002,858	\$81,027,509 56,234,320 34,765,530	\$2,001,143 2,590,240 2,158,076	3.9 5.2 5.1	93.0 90.7 89.3	3.1 4.1 5.5						
Bread and other bakery products.	1914 1909	57 39	10 6	19 8	306 282	79 70	169 143	58 60	25.8 28.0	55.2 50.7	19.0 21.3	1,370,225 1,214,185	387,708 405,857	628,233 551,310	354,284 257,018	28.3 33.4	45.8 45.4	25.9 21.2						
Butter, cheese, and condensed milk.	1914 1909	7 0	21 15	9 13	204 214	7 8	230 148	18 58	2.7 3.7	90.5 99.2	6.8 27.1	2,298,153 1,071,031	122,278 90,973	2,050,092 1,333,903	119,783 546,155	5.3 4.6	80.5 67.7	5.2 27.7						
Flour-mill and gristmill products.	1914 1909	15 8	60 40	5 12	198 184	21 15	170 151	7 18	10.0 8.2	85.0 82.1	3.5 9.8	3,155,513 3,130,895	431,887 244,681	2,595,553 2,615,989	128,073 270,225	13.7 7.8	82.2 83.6	4.1 8.6						
Foundry and machine-shop products.	1914 1909	15 13	19 11	14 3	530 373	36 101	420 242	65 30	6.8 27.1	80.9 64.9	12.3 8.0	1,501,001 922,125	68,611 263,746	1,205,161 586,725	167,010 71,654	4.6 28.6	84.2 63.6	11.2 7.8						
Lumber and timber products.	1914 1909	50 41	30 28	41 35	748 431	99 105	593 253	50 73	13.2 24.4	79.3 58.7	7.5 16.9	1,504,082 976,589	175,682 208,999	1,232,471 655,006	95,020 112,584	11.7 21.4	81.9 67.1	6.4 11.5						
Printing and publishing..	1914 1909	75 62	47 45	44 25	972 807	178 171	426 520	208 276	20.4 17.7	48.0 53.8	30.7 28.5	2,780,000 2,404,602	386,740 364,586	1,787,225 1,520,835	606,035 519,181	13.9 15.2	64.3 63.2	21.8 21.6						
Total for cities.....	1914	200	107	112	7,155	583	6,004	563	8.2	83.9	7.9	23,521,020	2,167,374	19,401,871	1,961,775	9.2	82.5	8.3						
OGDEN.....	1914	44	45	21	1,894	159	1,641	64	8.4	80.6	5.0	6,014,358	598,031	5,123,239	293,088	9.9	85.2	4.9						
PROVO.....	1914	17	12	4	330	29	293	8	8.8	88.8	2.4	843,722	77,650	682,842	83,221	9.2	89.9	9.9						
SALT LAKE CITY.....	1914	139	140	87	4,931	400	4,070	461	8.1	82.5	9.4	16,662,940	1,481,684	13,595,790	1,585,466	8.9	81.6	9.5						

Although individual ownership predominates in number of establishments, the figures in the preceding table indicate a marked trend toward corporate control of manufactures in Utah. While corporations represented but 35.2 per cent of the total number of plants engaged in manufacturing in 1914, they reported 93 per cent of the total value of products and 88 per cent of the total average number of wage earners. The proportions reported by establishments in this class have been greater at each successive census for both wage earners and value of products.

For both 1914 and 1909 the largest proportions of the total value of products and total average number of wage earners for each of the six industries for which separate statistics are given are shown for corporate

ownership. The same condition prevails in each of the three cities where more than 80 per cent of the total value of products and total average number of wage earners in 1914 were reported for this class.

**Size of establishments.**—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is indicated by the statistics given in Table 14.

Of the 1,109 establishments in the state in 1914, only 100, or 9 per cent, reported products exceeding \$100,000 in value, but this class contributed 73.5 per cent of the total average number of wage earners, 86 per cent of the total value of products, and 77.6 per cent of the total value added by manufacture. The output of these large establishments has formed an



increasingly large proportion of the total value of products at each successive census, from 78.8 per cent in 1904 to 82.8 per cent in 1909 and to 86 per cent in 1914. Similar increases appear also in the proportions of average number of wage earners and value added by manufacture for these establishments. The increases in value of products and average number of wage earners for the single group of establish-

ments with products valued at more than \$1,000,000 are still more pronounced. The small establishments—those having products less than \$5,000 in value—although representing 48.1 per cent of the total number of establishments in 1914, reported only 1.3 per cent of the total value of products and 3.6 per cent of the total average number of wage earners.

Table 14 VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904
All classes.....	1,109	749	606	13,894	11,785	8,052	\$87,112,360	\$61,089,277	\$38,926,464	\$24,879,180	\$20,723,616	\$13,980,637
Less than \$5,000.....	533	282	231	502	399	302	1,137,653	704,908	485,115	740,203	470,371	314,809
\$5,000 to \$20,000.....	297	220	201	1,007	870	935	2,944,461	2,270,058	2,213,115	1,036,553	1,219,958	1,188,471
\$20,000 to \$100,000.....	179	176	129	2,164	2,244	1,664	8,137,146	7,716,935	5,662,721	3,194,026	3,251,752	2,351,559
\$100,000 to \$1,000,000.....	89	64	40	5,143	5,081	3,163	20,441,745	18,197,110	9,687,447	9,172,395	8,197,586	4,261,505
\$1,000,000 and over.....	11	7	5	5,078	3,191	1,088	54,451,355	33,100,176	20,978,066	10,136,003	7,574,949	5,870,293
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	48.1	37.7	38.1	3.6	3.4	3.8	1.3	1.1	1.2	3.0	2.3	2.3
\$5,000 to \$20,000.....	26.8	29.4	33.2	7.2	7.4	11.6	3.4	3.7	5.7	6.9	5.9	8.5
\$20,000 to \$100,000.....	16.1	23.5	21.3	15.6	19.0	20.7	9.3	12.4	14.3	12.8	15.7	16.8
\$100,000 to \$1,000,000.....	8.0	8.5	6.6	37.0	43.1	39.3	23.5	29.4	24.9	36.9	39.6	30.5
\$1,000,000 and over.....	1.0	0.9	0.8	36.5	27.1	24.7	62.5	53.4	53.9	40.7	30.6	42.0

Table 15 gives, for 1914 and 1909, for six of the more important industries, a classification of establishments, wage earners, value of products, and value added by manufacture, similar to that presented in

Table 14 for all industries combined. It is impossible, without disclosing individual operations, to give statistics for industries embracing establishments with products valued at more than \$1,000,000.

Table 15 INDUSTRY AND VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1914	1909	Per cent distribution.	1914	1909	Per cent distribution.	1914	1909	Per cent distribution.	1914	1909	Per cent distribution.
BREAD AND OTHER BAKERY PRODUCTS.....	86	53	100.0	100.0	306	282	100.0	100.0	\$1,370,225	\$1,214,185	100.0	100.0
Less than \$5,000.....	39	21	45.3	39.6	18	7	5.9	2.5	97,570	54,833	7.1	4.5
\$5,000 to \$20,000.....	32	18	37.2	34.0	64	42	20.9	14.9	262,357	180,407	21.3	14.9
\$20,000 to \$100,000.....	11	11	12.8	20.8	102	101	33.3	35.8	409,439	436,822	29.9	36.0
\$100,000 to \$1,000,000.....	4	3	4.7	5.7	122	132	39.9	46.8	570,850	542,063	41.7	44.6
BUTTER, CHEESE, AND CONDENSED MILK.....	37	37	100.0	100.0	264	214	100.0	100.0	2,268,163	1,971,031	100.0	100.0
Less than \$5,000.....	7	4	18.9	10.8	7	3	2.7	1.4	24,227	12,539	1.1	0.6
\$5,000 to \$20,000.....	13	17	35.1	45.9	21	23	8.0	10.7	124,902	194,605	5.4	9.9
\$20,000 to \$100,000.....	12	12	32.4	32.4	57	43	21.6	20.1	430,884	461,205	18.7	23.4
\$100,000 to \$1,000,000.....	5	4	13.5	10.8	179	145	67.8	67.8	1,718,140	1,302,682	74.8	66.1
FLOUR-MILL AND GRISTMILL PRODUCTS.....	70	60	100.0	100.0	198	184	100.0	100.0	3,155,513	3,130,895	100.0	100.0
Less than \$5,000.....	4	3	5.7	5.0	1	1	0.5	0.5	11,061	9,224	0.4	0.3
\$5,000 to \$20,000.....	24	12	34.3	20.0	24	12	12.1	6.5	278,905	173,816	8.8	5.6
\$20,000 to \$100,000.....	33	38	47.1	63.3	107	113	54.0	61.4	1,671,685	1,793,761	49.8	57.3
\$100,000 to \$1,000,000.....	9	7	12.9	11.7	66	58	33.3	31.5	1,293,262	1,154,104	41.0	36.9
UNDREY AND MACHINE-SHOP PRODUCTS.....	48	27	100.0	100.0	530	373	100.0	100.0	1,501,691	922,125	100.0	100.0
Less than \$5,000.....	17	5	35.4	18.5	21	10	4.0	2.7	40,980	15,501	2.7	1.7
\$5,000 to \$20,000.....	20	10	41.7	37.0	78	53	14.7	14.2	164,523	107,460	11.0	11.7
\$20,000 to \$100,000.....	7	8	14.6	29.6	173	137	32.6	36.7	403,361	325,595	26.9	35.3
\$100,000 to \$1,000,000.....	4	4	8.3	14.8	258	173	48.7	46.4	892,827	473,569	59.5	51.4
LUMBER AND TIMBER PRODUCTS.....	130	104	100.0	100.0	748	431	100.0	100.0	1,504,082	976,589	100.0	100.0
Less than \$5,000.....	97	70	74.6	67.3	112	112	15.0	26.0	174,207	146,066	11.6	15.0
\$5,000 to \$20,000.....	21	20	16.2	19.2	80	93	10.7	21.6	383,126	181,359	12.2	18.6
\$20,000 to \$100,000.....	12	14	9.2	13.5	556	226	74.3	52.4	1,140,749	648,564	76.2	66.4
\$20,000 and over.....	12	14	9.2	13.5	556	226	74.3	52.4	1,140,749	648,564	76.2	66.4
PRINTING AND PUBLISHING.....	166	122	100.0	100.0	872	967	100.0	100.0	2,780,009	2,404,002	100.0	100.0
Less than \$5,000.....	95	62	57.2	50.8	99	95	11.4	9.8	223,927	150,828	8.1	6.3
\$5,000 to \$20,000.....	54	42	32.5	34.4	241	192	27.6	19.9	551,545	451,247	19.8	18.8
\$20,000 to \$100,000.....	11	13	6.6	10.7	147	253	16.9	26.2	501,951	680,006	18.1	28.3
\$100,000 to \$1,000,000.....	6	5	3.6	4.1	385	427	44.2	44.2	1,502,586	1,122,521	54.0	46.7

<sup>1</sup> Includes the group "\$100,000 to \$1,000,000."

The industries given in the above table show a general increase from 1909 to 1914 in the number of small establishments—those with products valued at less than \$5,000—and also an advance in the number of persons employed and in the value of the output of such plants. While establishments of this size constituted a large proportion of the total reported for each industry, except in the flour-mill and gristmill and dairy industries, the value of their products in only one case amounted to more than 10 per cent of the total.

The bulk of manufactures was reported by establishments having products valued at \$100,000 to \$1,000,000, but the number of enterprises engaged in business of this magnitude ranged only from 3.6 per cent to 13.5 per cent.

Table 16 presents, for 1914, for all industries combined in each of the three cities having more than 10,000 inhabitants, statistics similar to those given in Table 14 for the state as a whole.

In the cities the same general condition prevails that exists throughout the state, namely, a preponderance as to number of wage earners, value of products, and value added by manufacture, for establishments having products valued at \$100,000 and over. Each of the three cities shows a large proportion of small establishments, but their combined value of products was relatively small. Of the total number of establishments reporting products valued at less

than \$20,000, those in Ogden represented 61.8 per cent; those in Provo, 81.8 per cent; and those in Salt Lake City, 68.6 per cent; whereas the value of their products formed only 7.8 per cent, 20.7 per cent, and 9.1 per cent of the respective totals.

CITY AND VALUE OF PRODUCT.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
		Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.
OGDEN.....	110	1,804	100.0	\$0,014,368	100.0	\$2,446,707	100.0
Less than \$5,000.....	28	32	1.7	67,870	1.1	45,331	1.8
\$5,000 to \$20,000.....	40	150	8.2	404,400	6.7	243,185	9.9
\$20,000 to \$100,000.....	29	362	19.1	1,217,331	20.2	550,822	22.5
\$100,000 and over <sup>1</sup> .....	13	1,344	71.0	4,324,761	71.9	1,607,360	65.7
PROVO.....	33	330	100.0	843,722	100.0	332,340	100.0
Less than \$5,000.....	14	11	3.3	27,763	3.3	17,004	5.1
\$5,000 to \$20,000.....	13	51	15.5	146,705	17.4	71,385	21.5
\$20,000 to \$100,000.....	3	27	8.2	131,377	15.6	35,235	10.6
\$100,000 to \$1,000,000.....	3	241	73.0	537,817	63.7	208,665	62.8
SALT LAKE CITY....	300	4,031	100.0	10,002,940	100.0	8,120,505	100.0
Less than \$5,000.....	138	90	1.9	302,871	1.8	200,283	2.5
\$5,000 to \$20,000.....	113	458	9.3	1,215,047	7.3	785,020	9.7
\$20,000 to \$100,000.....	71	995	20.2	3,244,110	19.6	1,631,390	18.8
\$100,000 and over <sup>1</sup> .....	44	3,882	68.6	11,900,312	71.4	5,600,903	69.0

<sup>1</sup> Includes the group "\$1,000,000 and over."

Table 17 shows the size of establishments in 1914, as measured by the average number of wage earners employed, for all industries combined, and for 13 of the more important industries, and for each of the three cities having more than 10,000 inhabitants.

INDUSTRY AND CITY.		TOTAL.		ESTABLISHMENTS EMPLOYING—															
				No wage earners.		1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.		51 to 100 wage earners.		101 to 250 wage earners.		251 to 500 wage earners.		501 to 1,000 wage earners.	
				Establishments.	Wage earners (average number).	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
All industries.....		1,100	13,894	221	621	1,278	150	1,700	55	1,656	29	2,111	17	2,500	2	820	5	3,754	
Bread and other bakery products.....		80	306	31	41	82	11	116	3	108	1	95	1	110					
Brick and tile.....		27	438		15	35	7	80	3	103									
Butter, cheese, and condensed milk.....		37	264	4	25	54	4	38	2	46	2	120							
Canning and preserving.....		37	677	1	7	16	17	245	0	239	3	177							
Cars and general shop construction and repairs by steam-railroad companies.....		8	2,193		1	2					2	100	2	235	1	364	2	1,423	
Confectionery.....		31	617	3	16	33	7	87	1	22	2	131	2	344					
Flour-mill and gristmill products.....		70	198	8	55	135	7	63											
Foundry and machine-shop products.....		48	530	4	29	66	8	90	2	143	2	114	1	117					
Liquors, malt.....		6	204			1	9		2	69	2	126							
Lumber and timber products.....		130	748	10	98	167	11	112	3	85			2	384					
Marble and stone work.....		23	340	6	13	35			2	56			2	258					
Printing and publishing.....		160	872	43	89	193	26	231	5	149	2	140	1	159					
Smelting, lead.....		3	1,882												1	465	2	1,417	
All other industries.....		438	4,610	106	232	460	60	626	21	636	13	1,033	6	947		1	614		
Total for cities.....		509	7,155	86	241	604	122	1,301	31	948	17	1,195	9	1,320	1	364	2	1,423	
OGDEN.....		110	1,804	5	62	148	30	356	7	190	4	289	1	121			1	790	
PROVO.....		33	330	5	20	48	5	42	1	26	1	65	1	149					
SALT LAKE CITY.....		366	4,031	70	159	408	87	903	23	732	12	841	7	1,050	1	364	1	633	

Table 18 presents, for 1914, percentages based on the figures in Table 17, and for 1909, similar percentages for all industries combined and for individual industries in the state as a whole.

Of the total number of establishments for all industries combined, 221, or 19.9 per cent, employed no wage earners in 1914. In these establishments all the work was done by the proprietors or firm members,

aided in some cases by members of their families or by persons classed as salaried employees. Some of them employed one or two wage earners for short periods, but the numbers were so small and the periods so short that the average (computed as described in the "Explanation of terms") amounted to less than one, and therefore no wage earners could be shown. The very small establishments greatly predominate in number, those employing from 1 to 5 wage earners, representing 56 per cent of the total number of establishments but reporting only 9.2 per cent of the total number of wage earners. On the other hand, the establishments having more than 250 wage earners, although representing only six-tenths of 1 per cent of the total number of establishments, gave employment to 33 per cent of the average number of wage earners. The groups of establishments having more than 50 wage earners represented only 4.8 per cent of the total num-

ber of establishments in the state, but reported 66.6 per cent of the total average number of wage earners. As an indication of the nature of the industries embracing the smaller establishments, it will be noticed that in the brick and tile, dairy-products, confectionery, flour-mill and gristmill, foundry and machine-shop, lumber and timber, marble and stone work, and printing and publishing industries the majority of the establishments employed from 1 to 5 wage earners. In three of these industries, however—confectionery, lumber and timber, and marble and stone work—as well as in the steam-railroad repair shops and in the malt-liquor and lead-smelting industries, the majority of the wage earners were in establishments reporting more than 100 wage earners. In Ogden, 48.1 per cent of the wage earners were in establishments employing more than 100 wage earners; in Provo, 45.2 per cent, and in Salt Lake City, 41.5 per cent.

Table 18

INDUSTRY AND CITY.	Cen-sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.								INDUSTRY AND CITY.	Cen-sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000			1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
All industries.....	1914 1909	9.2 8.5	12.3 12.5	11.9 16.5	15.2 7.5	18.4 19.6	6.0 5.6	27.0 20.4	9.4	Foundry and machine-shop products.....	1914 1909	12.5 12.6	17.0 17.7	27.0 54.7	21.5 15.0	22.1	.....	.....	.....
Bread and other bakery products.....	1914 1909	26.8 18.4	37.9 27.0	35.3 33.0	21.6	.....	.....	.....	.....	Liquors, malt.....	1914 1909	..... 2.2	4.4 .....	33.8 64.6	61.8 33.1	.....	.....	.....	.....
Brick and tile.....	1914 1909	8.0 9.3	20.3 6.6	23.5 15.4	21.7 31.8	26.5 36.9	.....	.....	.....	Lumber and timber products.....	1914 1909	22.3 33.9	15.0 47.6	11.4 18.6	.....	51.3	.....	.....	.....
Butter, cheese, and condensed milk.....	1914 1909	20.5 27.1	14.4 7.5	17.4 39.7	47.7 25.7	.....	.....	.....	.....	Marble and stone work.....	1914 1909	10.0 33.9	..... 47.9	16.0 18.2	.....	73.9	.....	.....	.....
Canning and preserving.....	1914 1909	2.4 4.5	36.2 36.4	35.3 59.1	26.1	.....	.....	.....	.....	Printing and publishing.....	1914 1909	22.1 17.0	26.5 22.4	17.1 22.6	16.1 7.0	18.2 31.0	.....	.....	.....
Cars and general shop construction and repairs by steam-railroad companies.....	1914 1909	0.1 0.3	..... 1.0	.....	7.7 4.5	10.7 6.4	16.0 16.0	64.9 71.1	.....	Smelting, lead.....	1914 1909	.....	.....	.....	.....	.....	24.7	75.3	.....
Confectionery.....	1914 1909	5.3 2.7	14.1 6.5	3.6 10.4	21.2 28.3	55.8 46.1	.....	.....	.....	All other industries.....	1914 1909	10.0 4.7	13.6 9.2	13.8 12.4	22.4 3.8	20.5 24.2	.....	19.8 6.4	19.0 20.3
Flour-mill and gristmill products.....	1914 1909	68.2 67.9	31.8 32.1	.....	.....	.....	.....	.....	.....	Total for cities.....	1914	8.4	18.2	13.2	16.7	18.4	5.1	19.9	.....
										OGDEN.....	1914	7.8	18.8	10.0	15.3	6.4	.....	41.7	.....
										PROVO.....	1914	14.5	12.7	7.9	19.7	45.2	.....	.....	.....
										SALT LAKE CITY.....	1914	8.3	18.3	14.8	17.1	21.3	7.4	12.8	.....

**Engines and power.**—Table 19 shows, for 1914, 1909, and 1904, for all industries combined, the number and total horsepower of engines or motors employed in generating primary power (including electric motors

operated by purchased current). It also shows separately the number and horsepower of electric motors operated by current generated in the establishments reporting.

Table 19

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904
Primary power, total.....	2,335	1,351	365	59,536	42,947	19,397	100.0	100.0	100.0
Owned.....	514	462	365	37,984	32,307	16,456	63.8	75.2	84.8
Steam engines and turbines <sup>1</sup> .....	366	352	259	34,020	29,084	13,145	57.1	67.7	67.8
Internal-combustion engines.....	50	27	11	470	220	59	0.8	0.5	0.3
Water wheels, turbines, and motors.....	98	83	95	3,494	2,997	3,252	5.9	7.0	16.3
Rented.....	1,821	889	(2)	21,552	10,640	2,941	36.2	24.8	15.2
Electric.....	1,821	889	(2)	21,552	10,592	2,941	36.2	24.7	15.2
Other.....	.....	.....	.....	48	.....	.....	.....	0.1	.....
Electric.....	2,338	1,192	.....	34,018	15,402	4,272	100.0	100.0	100.0
Rented.....	1,821	889	(2)	21,552	10,592	2,941	63.4	68.8	68.8
Generated by establishments reporting.....	517	303	60	12,466	4,810	1,331	36.6	31.2	31.2

<sup>1</sup> Figures for horsepower include for 1909 and 1904 the amount reported under the head of "other" owned power.

<sup>2</sup> Not reported.

This table shows an increase in primary power amounting to 16,589 horsepower, or 38.6 per cent, from 1909 to 1914, due largely to the increase in rented electric power. The use of this form of power has greatly increased since 1904, when it represented 15.2 per cent of the total primary power, as against 24.7 per cent in 1909 and 36.2 per cent in 1914. Electric motors run by current generated within the same establishments show a still greater proportional increase, but this class of power represented only a little more than one-third of the total electric power in 1914. The amount of steam power used, which constituted more than two-thirds of the total primary power in 1904 and 1909 and considerably more than one-half in 1914, more than doubled between 1904 and 1909, and increased by about one-sixth during the following five-year period. The power developed by internal-combustion engines, although it formed less than 1 per cent of the total primary power in 1914, increased rapidly during the decade.

The power derived from water wheels, turbines, and motors has shown a decreasing proportion of the total from census to census, although the amount of this power in use increased by about one-sixth between 1909 and 1914.

**Fuel.**—Closely related to the subject of power employed in manufactures is that of the fuel consumed

in generating this power or otherwise used in the manufacturing processes.

Table 20 shows, for 1914, the quantity of each kind of fuel used for which data were obtained, for all industries combined and for selected industries in the state as a whole, and for all industries combined in each city.

INDUSTRY AND CITY.	COAL.				
	Anthracite (tons, 2,240 lbs.).	Bituminous (tons, 2,000 lbs.).	Coke (tons, 2,000 lbs.).	Oil, including gasoline (barrels).	Gas (1,000 cubic feet).
All Industries.....	1,585	1,150,745	201,867	391,357	20,376
Bread and other bakery products.....	184	3,053	1,197	2	821
Brick and tile.....		25,461			
Cars and general shop construction and repairs by steam-railroad companies.....	856	36,782	806	28,501	
Cement.....		92,185	9		600
Coke.....		673,752			
Confectionery.....		2,906	322		10,152
Foundry and machine-shop products.....	21	4,408	1,427	90	301
Gas, illuminating and heating.....		35,792		6,661	
Ice, manufactured.....		13,641			15
Liquors, malt.....	34	11,038	220		
Smelting, lead.....		102,063	147,186	45,176	
All other industries.....	400	140,574	53,700	310,807	8,433
Total for cities.....	1,538	138,123	6,842	9,800	20,376
OGDEN.....	230	25,119	710	6,218	4,912
PROVO.....	1	4,221	140	4	763
SALT LAKE CITY.....	1,301	108,780	5,992	3,557	14,701

### SPECIAL STATISTICS.

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantities and cost of materials, the quantities and values of products, and other information for which no provision is made on the general schedule. Certain data of this character for four important industries in Utah are here presented.

**Butter, cheese, and condensed milk.**—The quantities and values of the several products of the butter, cheese, and condensed-milk industry are shown, for 1914, 1909, and 1904, in Table 21.

Table 21	1914	1909	1904 <sup>1</sup>
Total value.....	\$2,208,153	\$1,971,031	\$963,811
Butter:			
Packed solid—			
Pounds.....	1,416,751	650,707	281,276
Value.....	\$412,040	\$103,311	\$33,100
Prints or rolls—			
Pounds.....	2,123,006	3,072,077	3,421,911
Value.....	\$639,103	\$941,077	\$748,589
Cream sold:			
Pounds.....	487,931	1,114,830	55,046
Value.....	\$53,083	\$128,528	\$4,470
Cheese, full cream:			
Pounds.....	1,094,448	1,000,122	1,089,730
Value.....	\$153,252	\$157,058	\$161,721
All other butter and cheese, factory products, value <sup>2</sup> .....	\$5,597	\$2,006	\$8,639
All other products, value.....	\$1,035,078	\$546,051	\$7,292

<sup>1</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.

<sup>2</sup> Includes small quantity of part-cream cheese.

<sup>3</sup> Includes skimmed milk sold, whey, and casein.

The output of butter in the state decreased in quantity by 4.4 per cent but increased in value by 34.5 per

cent during the decade 1904–1914. The decrease was confined to butter in prints or rolls, that packed solid showing a substantial increase. The manufacture of cheese also declined during the decade, the decrease in quantity amounting to 35.2 per cent and that in value to 5.2 per cent.

The manufacture of condensed milk forms an important part of the dairy-products industry in Utah, but statistics relating to it can not be shown separately without disclosing the operations of individual establishments.

**Canning and preserving.**—Canning and preserving as a factory industry has made rapid progress in Utah. Table 22 shows the quantity and value of products, by classes, for 1914, 1909, and 1904.

During the five-year period 1909–1914 there were increases in both quantities and values of all the products shown in the table, with the single exception of canned pumpkin, which is of relatively small importance. Canned vegetables were the chief products at each of the three censuses, representing 79.8 per cent of the total value of all products for the industry in 1914, as compared with 73.3 per cent in 1909 and 82.2 per cent in 1904. From 1909 to 1914 the total value of canned vegetables increased by 149.8 per cent. Canned tomatoes alone contributed 51.5 per cent of the aggregate value of products of the entire canning and preserving industry in 1914.

Table 22	1914	1909	1904 <sup>1</sup>
Total value.....	\$2,420,804	\$1,059,487	\$801,958
Canned vegetables, value.....	\$1,938,927	\$776,136	\$669,509
Beans—			
Cases, No. 2 cans.....	64,592	15,857	5,303
Value.....	\$134,791	\$33,084	\$8,220
Peas—			
Cases, No. 2 cans.....	334,144	61,156	41,634
Value.....	\$510,892	\$100,712	\$80,155
Pumpkin—			
Cases, No. 3 cans.....	3,625	2,860	1,100
Value.....	\$5,500	\$5,000	\$2,276
Tomatoes—			
Cases, No. 3 cans.....	606,257	332,372	312,430
Value.....	\$1,250,280	\$603,898	\$566,578
All other—			
Cases.....	14,905	8,102	635
Value.....	\$37,464	\$32,542	\$2,280
Canned fruits, value.....	\$210,209	\$32,305	\$51,686
Apples—			
Cases, No. 3 cans.....	12,591	4,101	2,346
Value.....	\$21,562	\$9,956	\$4,687
Berries—			
Cases, No. 2 cans.....	2,206	1,609	1,012
Value.....	\$4,787	\$3,463	\$2,684
Peaches—			
Cases, No. 3 cans.....	20,955	2,430	17,845
Value.....	\$43,399	\$5,806	\$43,868
Pears—			
Cases, No. 3 cans.....	4,777	1,566	8,300
Value.....	\$14,347	\$7,108	\$21,070
All other—			
Cases.....	66,355	2,080	9,826
Value.....	\$135,114	\$6,032	\$19,308
All other products, value.....	\$271,668	\$250,086	\$50,703

<sup>1</sup> In addition, vegetables, canned and preserved, valued at \$12,550, were reported as by-products by establishments in other industries.

<sup>2</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.

**Flour-mill and gristmill products.**—Table 23 gives the quantities and values of flour-mill and gristmill products for the last three census years.

Table 23	1914	1909	1904
Total value.....	\$3,155,513	\$3,130,805	\$2,425,791
Wheat flour:			
Barrels.....	505,224	459,248	453,804
Value.....	\$2,242,417	\$2,255,109	\$1,993,322
Rye flour:			
Barrels.....	223	305	546
Value.....	\$1,088	\$2,038	\$2,232
Corn meal and corn flour:			
Barrels.....	154	259	1,057
Value.....	\$886	\$1,239	\$5,316
Bran and middlings:			
Tons.....	21,450	( <sup>1</sup> )	( <sup>1</sup> )
Value.....	\$474,493	( <sup>1</sup> )	( <sup>1</sup> )
Feed and offal:			
Tons.....	16,573	27,294	25,647
Value.....	\$410,125	\$588,511	\$438,771
Breakfast foods:			
Pounds.....	685,910		
Value.....	\$20,835		
All other cereal products, value.....	\$5,669	\$83,580	\$300
All other products, value.....		\$95,418	\$15,850

<sup>1</sup> Included in "feed and offal."

Wheat flour is the principal product, representing 71.1 per cent of the total value of products in 1914, as compared with 75.2 per cent in 1909 and 80.9 per cent in 1904. The decrease in the value of wheat flour from 1909 to 1914, notwithstanding an increase in quantity, was due to the low price of this product which prevailed during a portion of the year 1914. The remaining items shown in the table are unimportant in Utah, with the exception of bran and

middlings and feed and offal, which in 1914 were valued at \$474,493 and \$410,125, respectively. Three establishments in the industry reported the manufacture of sacks. The equipment reported for 1914 consisted of 333 stands of rolls, 21 runs of stone, and 34 attrition mills.

**Printing and publishing.**—Table 24 shows, for 1914, 1909, and 1904, the number of publications and their aggregate circulation, by period of issue.

Table 24	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
PERIOD OF ISSUE.	1914	1909	1904	1914	1909	1904
Total.....	121	94	88	376,962	261,937	228,126
Daily.....	8	8	10	82,171	57,498	42,282
Sunday.....	3	3	3	62,580	45,498	34,200
Semiweekly.....	6	18	27	26,642	35,863	40,252
Weekly.....	82	65	57	61,359	71,542	65,742
Monthly.....	19	10	7	79,950	51,606	30,000
All other classes.....	3		4	4,280		15,650

<sup>1</sup> Includes 3 triweeklies.

<sup>2</sup> Includes 1 triweekly.

<sup>3</sup> Includes 2 semimonthlies.

The total number of newspapers and periodicals in the state and the aggregate circulation per issue has increased from census to census. The increase in circulation was most pronounced for the daily, Sunday, and monthly publications, and for the last-named class there was also a considerable increase in number. The number of Sunday papers remained the same, but their circulation more than doubled between 1909 and 1914. The semiweeklies are the only class for which decreases in number and circulation are shown for the period 1909-1914.

There were 10 publications in foreign languages, 9 of which were weeklies, with a circulation of 10,400. Three were printed in the Swedish language, 2 in Greek, and 1 each in German, Italian, Danish, and Dutch. The 1 triweekly was in Japanese.

**Laundries.**—Statistics for power laundries are not included in the general tables or in the totals for all manufacturing industries. Table 25, however, summarizes these statistics for Utah for 1914 and 1909.

Table 25	POWER LAUNDRIES.		
	Number or amount.		Per cent of increase, 1909-1914.
	1914	1909	
Number of establishments.....	36	22	63.6
Persons engaged.....	1,197	811	47.6
Proprietors and firm members.....	31	16	93.8
Salaried employees.....	96	57	68.4
Wage earners (average number).....	1,070	738	45.0
Primary horsepower.....	1,926	969	98.8
Capital.....	\$1,213,051	\$500,276	142.6
Salaries and wages.....	689,040	415,309	65.9
Salaries.....	108,567	72,717	49.3
Wages.....	580,473	342,592	69.4
Paid for contract work.....	1,600	360	344.4
Rent and taxes (including internal revenue).....	31,737	7,535	321.2
Cost of materials.....	321,923	143,041	125.1
Amount received for work done.....	1,367,433	794,091	72.2

In 1914 Utah ranked twenty-seventh among the states in amount received for work done and thirty-second in number of persons engaged in the industry. Increases are shown for the five-year period in all items given in the table, that in receipts for work done amounting to \$1,367,433, or 72.2 per cent. Of the 36 establishments operating in 1914, 20 were under individual ownership but reported only 9.2 per cent of the total amount received for work done, while the 12 under corporate ownership reported 88.9 per cent of the total receipts. The 4 under other forms of ownership were credited with 1.9 per cent of amount received for work done. Sixteen establishments reported receipts of less than \$5,000; 8, receipts of \$5,000 or more but less than \$20,000; and 12, receipts of \$20,000 and over. In 1909, of the 22 establishments reported, 10 were under individual ownership, 9 under corporate, and 3 under other forms.

Table 26 shows, for 1914 and 1909, the number of wage earners employed in the laundries on the 15th day of each month, or the nearest representative day, and the percentage which this number represents of the greatest number employed in any month of the same year.

Table 27 gives statistics as to kinds and amounts of power used in the laundries of the state in 1914 and

1909, together with percentages of increase for the five-year period.

MONTH.	WAGE EARNERS.			
	Number.		Per cent of maximum.	
	1914	1909	1914	1909
January.....	1,111	699	100.0	83.4
February.....	1,079	690	97.1	82.3
March.....	1,074	690	96.7	82.3
April.....	1,057	693	95.1	82.7
May.....	1,051	700	94.6	83.5
June.....	1,050	710	95.0	88.3
July.....	1,086	814	97.7	97.1
August.....	1,097	838	98.7	100.0
September.....	1,083	759	97.5	90.6
October.....	1,050	712	94.5	88.5
November.....	1,030	712	93.2	88.5
December.....	1,060	714	95.4	88.8

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.		
			Amount.		Per cent of increase, 1909-1914.
	1914	1909	1914	1909	
Primary power, total.....	58	30	1,920	969	98.8
Owned.....	35	20	1,832	927	97.6
Steam.....	31	20	1,762	927	90.1
Internal-combustion.....	3	.....	64	.....	.....
Water wheels and motors.....	1	.....	6	.....	.....
Rented—Electric.....	23	10	94	42	123.8
Electric.....	276	115	1,261	315	265.5
Rented.....	23	10	94	42	123.8
Generated by establishments reporting	253	105	1,167	303	285.1

## GENERAL TABLES.

Table 28 gives, for 1914, 1909, and 1904, for selected industries in the state and in Salt Lake City, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products; and for Ogden, similar data for all industries combined.

Table 29 presents, for 1914, for the state as a whole and for Salt Lake City, statistics in detail for each industry for which figures can be shown without disclosing the operations of individual establishments; and for Ogden and Provo, similar data for all industries combined.

TABLE 28.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904.

INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse-power.	Wages.	Cost of materials.	Value of products.	INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse-power.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.								Expressed in thousands.		
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.															
All industries.....	1914	1,109	13,894	59,536	\$10,852	\$62,233	\$87,112	Hosiery and knit goods...	1914	11	183	47	\$66	\$283	\$528
	1909	749	11,785	42,947	8,400	41,206	61,989		1909	11	174	80	53	292	419
	1904	606	8,052	19,397	5,157	24,940	38,926		1904	9	171	25	48	167	326
Bread and other bakery products.	1914	86	306	249	198	799	1,370	Leather goods.....	1914	53	134	31	91	319	509
	1909	53	282	115	165	747	1,214		1909	19	115	24	75	259	426
	1904	28	191	77	90	281	542		1904	16	80	3	46	107	222
Brick and tile.....	1914	27	438	2,646	280	123	625	Liquors, malt.....	1914	5	204	887	103	349	1,346
	1909	37	610	1,823	388	193	878		1909	5	178	860	167	290	1,357
	1904	45	325	912	193	97	423		1904	6	134	323	93	176	637
Butter, cheese, and condensed milk.	1914	37	264	1,312	144	1,891	2,208	Lumber and timber products.	1914	130	748	3,837	582	562	1,504
	1909	37	214	635	116	1,013	1,971		1909	104	431	2,922	306	435	977
	1904	49	98	813	55	789	964		1904	53	182	1,380	105	139	334
Canning and preserving..	1914	37	677	1,030	267	1,609	2,430	Marble and stone work...	1914	23	349	1,148	354	125	859
	1909	24	396	847	123	716	1,059		1909	25	121	309	106	91	270
	1904	18	369	500	99	506	802		1904	9	57	225	39	30	102
Cars and general shop construction and repairs by steam-railroad companies.	1914	8	2,193	3,099	1,943	1,506	3,575	Printing and publishing.	1914	166	872	1,246	741	880	2,780
	1909	8	1,731	1,735	1,402	1,225	2,740		1909	122	967	1,357	685	723	2,405
	1904	7	1,248	354	964	827	1,887		1904	104	545	262	369	325	1,523
Confectionery.....	1914	31	617	902	251	1,268	2,125	Salt.....	1914	7	92	367	49	80	288
	1909	17	586	532	204	1,291	1,971		1909	9	56	474	38	53	184
	1904	12	335	222	103	688	1,005		1904	5	68	183	44	51	237
Flour-mill and gristmill products.	1914	70	198	3,519	144	2,637	3,156	Slaughtering and meat packing.	1914	14	138	349	115	2,672	3,011
	1909	60	184	3,312	131	2,511	3,131		1909	12	99	572	77	1,327	1,690
	1904	63	150	3,047	91	2,043	2,426		1904	3	31	25	21	514	653
Foundry and machine-shop products.	1914	48	530	1,296	434	818	1,502	All other industries.....	1914	352	5,743	35,051	4,829	45,978	58,589
	1909	27	373	541	306	407	922		1909	176	5,101	26,428	3,990	28,925	40,028
	1904	21	277	99	198	248	587		1904	150	3,750	10,942	2,577	17,914	26,096
Gas, illuminating and heating.	1914	4	208	720	141	270	617								
	1909	3	167	291	108	108	396								
	1904	3	41	.....	22	32	100								

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

SALT LAKE CITY—All industries.	1914	366	4,931	12,755	\$3,801	\$8,533	\$16,603	Foundry and machine-shop products.	1914	24	393	1,046	\$326	\$633	\$1,128
	1909	245	4,287	6,693	\$3,010	6,615	13,351		1909	19	301	404	257	316	751
	1904	192	2,776	.....	1,704	3,515	7,544		1904	13	244	.....	177	223	524
Bread and other bakery products.	1914	25	189	164	123	522	848	Lumber and timber products.	1914	11	246	880	145	305	558
	1909	24	220	80	122	509	918		1909	8	136	375	117	169	376
	1904	15	143	.....	67	218	422		1904	5	59	.....	38	50	132
Confectionery.....	1914	18	437	583	162	859	1,397	Printing and publishing..	1914	81	646	1,033	500	752	2,270
	1909	9	300	360	135	955	1,409		1909	49	740	1,207	561	615	1,983
	1904	9	234	.....	76	534	760		1904	43	362	.....	273	257	1,236
Copper, tin, and sheet-iron work.	1914	22	84	40	68	95	257	All other industries.....	1914	185	2,936	9,009	2,387	5,367	10,205
	1909	11	104	10	85	105	258		1909	125	2,390	4,257	1,733	3,886	7,656
	1904	7	51	.....	39	43	113		1904	100	1,683	.....	1,034	2,190	4,357

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

Ogden.....	1914	110	1,894	3,184	\$1,202	\$3,568	\$6,014	Ogden (continued).....	1904	63	1,013	.....	\$711	\$1,393	\$2,507
	1909	68	1,323	2,506	873	2,066	3,713								

<sup>1</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.

<sup>2</sup> Includes canning and preserving, fruits and vegetables; and pickles, preserves, and sauces.

<sup>3</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.

<sup>4</sup> Includes automobile repairing and structural ironwork.

<sup>5</sup> Includes saddlery and harness and valises.

<sup>6</sup> Includes boxes, wooden packing; lumber, planing-mill products; and window and door screens.

<sup>7</sup> Includes bookbinding and blank-book making; engraving, steel and copper plate, including plate printing; lithographing; printing and publishing, book and job, and printing and publishing, newspapers and periodicals.

<sup>8</sup> Includes automobile repairing, hardware, and structural ironwork.



TABLE 29.—DETAIL STATEMENT FOR THE STATE, AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.			
					Male.	Female.	Average number.	Number, 15th day of—		Male.	Female.	Male.		Female.	
								Maximum month.							Minimum month.

## THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES

1	All industries.....	1,109	17,126	999	730	1,298	190	13,894	Se	15,704	Fe	12,382	(2)	(2)	(2)	(2)	(2)	\$71,843,168
2	Artificial stone products.....	24	126	32	4	2	.....	88	Se	140	Ja	14	100	100	.....	.....	.....	153,068
3	Automobile repairing.....	7	43	5	3	2	2	31	Se	33	Do	27	28	28	.....	.....	.....	74,660
4	Awnings, tents, and sails.....	5	39	7	1	.....	.....	30	Jy	32	Fe	28	30	10	11	.....	.....	81,300
5	Brass and bronze products.....	3	6	4	.....	.....	.....	2	Ja	3	Do	1	2	2	.....	.....	.....	12,050
6	Bread and other bakery products.....	86	472	107	16	27	16	306	My	318	Mh	296	313	256	54	3	.....	1,049,717
7	Brick and tile.....	27	504	25	20	19	2	438	Jo	633	Fe	275	601	582	.....	19	.....	1,903,964
8	Brooms, from broom corn.....	4	12	7	.....	.....	.....	5	.....	45	.....	45	6	6	.....	.....	.....	4,250
9	Butter.....	23	102	11	9	20	4	118	Jo	129	Fe	100	126	106	20	.....	.....	614,061
10	Canning and preserving, fruits and vegetables.....	31	716	2	40	28	6	634	Se	2,227	Fe	62	2,313	809	1,225	102	177	2,081,707
11	Carrriages, wagons, and repairs.....	11	88	11	6	.....	.....	71	.....	.....	.....	.....	72	71	.....	1	.....	128,533
12	Carrriages and wagons.....	7	79	5	0	.....	.....	68	My	71	Ja	63	69	68	.....	.....	.....	124,133
13	Repair work only.....	4	9	0	.....	.....	.....	3	.....	43	.....	43	3	3	.....	.....	.....	4,100
14	Cars and general shop construction and repairs by electric-railroad companies.....	4	174	.....	4	4	.....	100	Mh	203	No	141	147	147	.....	.....	.....	273,300
15	Cars and general shop construction and repairs by steam-railroad panies.....	8	2,322	.....	48	75	6	2,193	Ja	2,282	My	2,005	2,075	2,073	2	.....	.....	2,557,684
16	Cement.....	3	306	.....	12	24	3	267	Se	306	Mh	222	270	268	2	.....	.....	3,741,447
17	Coffins, burial cases, and undertakers' goods.....	4	21	2	3	1	.....	15	My	17	Au	13	16	14	2	.....	.....	85,419
18	Confectionery and ice cream.....	50	966	52	43	93	16	762	.....	.....	.....	.....	947	309	607	10	21	1,481,037
19	Confectionery.....	31	773	25	30	80	15	617	Oo	773	My	542	783	214	543	6	20	1,349,339
20	Ice cream.....	28	193	27	13	7	1	145	Jy	180	Fe	118	104	95	64	4	1	131,098
21	Copper, tin, and sheet-iron work.....	56	202	66	8	4	1	123	Au	150	Fe	99	129	126	.....	3	.....	160,058
22	Engraving and die-sinking.....	3	4	3	.....	.....	.....	1	.....	41	.....	41	1	1	.....	.....	.....	1,250
23	Engraving, steel and copper plate, including plate printing.....	5	45	2	2	1	1	39	Do	46	Au	35	42	25	14	2	1	34,660
24	Flour-mill and gristmill products.....	70	281	26	36	20	1	198	Oo	217	Jy	178	210	208	.....	2	.....	2,090,288
25	Food preparations, not elsewhere specified.....	10	76	19	4	7	2	44	Jy	60	Fe	31	47	36	10	1	.....	118,305
26	Foundry and machine-shop products.....	36	567	33	30	24	2	469	.....	.....	.....	.....	457	453	.....	4	.....	1,535,741
27	Foundries.....	5	55	2	5	2	.....	47	Jo	58	Ja	36	49	49	.....	.....	.....	87,967
28	Machine shops.....	31	511	31	34	23	2	422	Ja	470	Do	348	408	401	.....	4	.....	1,447,774
29	Fur goods.....	3	9	5	.....	.....	.....	4	Do	8	Jy	2	9	2	7	.....	.....	14,950
30	Furniture, wood, including store and office fixtures.....	5	61	4	3	1	1	52	Se	75	No	36	43	42	.....	1	.....	48,493
31	Gas, illuminating and heating.....	4	283	.....	11	45	16	208	Jy	383	Fe	130	130	136	.....	.....	.....	5,676,953
32	Grease and tallow.....	3	4	3	.....	.....	.....	1	.....	41	.....	41	1	1	.....	.....	.....	1,100
33	Hair work.....	6	12	6	.....	.....	.....	6	.....	46	.....	46	6	6	.....	.....	.....	13,010
34	Hosiery and knit goods.....	11	250	7	20	20	11	183	Oo	233	Fe	110	192	22	106	1	3	375,841
35	Ice, manufactured.....	10	60	7	11	2	2	38	Jy	52	Ja	25	35	35	.....	.....	.....	919,443
36	Jewelry.....	7	34	5	2	2	1	24	Au	424	.....	424	24	22	1	1	.....	34,729
37	Lime.....	10	63	11	1	2	.....	49	Se	67	Fe	26	68	68	.....	.....	.....	80,703
38	Liquors, malt.....	5	200	7	20	28	1	204	Jy	244	No	160	189	180	.....	.....	.....	2,150,012
39	Lumber and timber products.....	83	631	148	7	12	.....	364	Au	625	My	277	678	604	13	1	.....	479,707
40	Lumber, planing-mill products, not including planing mills connected with sawmills.....	42	422	27	22	16	2	356	Oo	560	Ja	238	500	557	1	2	.....	536,340
41	Marble and stone work.....	23	395	30	11	6	.....	340	No	391	Ja	220	367	306	.....	1	.....	635,897
42	Mattresses and spring beds.....	5	85	3	8	5	.....	69	No	75	Fe	62	75	60	15	.....	.....	200,484
43	Mineral and soda waters.....	25	108	21	7	10	2	68	Au	97	Do	45	87	64	10	13	.....	191,972
44	Optical goods.....	8	32	4	4	1	1	22	.....	422	.....	422	22	18	1	3	.....	61,230
45	Patent medicines and compounds.....	11	36	0	3	7	1	19	Se	27	Fe	13	30	15	11	4	.....	110,981
46	Pickles, preserves, and sauces.....	6	65	4	4	14	.....	43	Se	59	Do	33	40	18	22	.....	.....	231,370
47	Printing and publishing, book and job.....	48	371	48	27	8	.....	261	.....	.....	.....	.....	204	219	34	11	.....	541,637
48	Job printing.....	40	344	40	26	19	6	253	Jo	258	Oo	246	255	211	34	10	.....	492,775
49	Book publishing without printing.....	3	13	2	1	8	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24,948
50	Lithotype work and typesetting.....	5	14	0	.....	.....	.....	8	Do	9	Se	7	9	8	.....	1	.....	23,014
51	Printing and publishing, newspapers and periodicals.....	108	1,047	71	62	340	38	536	.....	.....	.....	.....	550	449	76	20	5	1,564,599
52	Printing and publishing.....	9	512	2	19	286	20	186	Oo	191	Au	181	188	177	7	4	.....	979,858
53	Printing, publishing, and job printing.....	71	474	59	29	38	9	339	No	354	Au	327	348	263	65	15	5	491,933
54	Publishing without printing.....	28	61	10	14	17	9	11	Jo	13	Se	9	14	9	4	1	.....	92,808
55	Roofing materials, other than metal.....	4	20	.....	5	6	1	9	Oo	12	My	7	12	12	.....	.....	.....	115,319
56	Saddlery and harness.....	48	200	56	8	13	1	122	Jo	129	Do	111	113	113	.....	.....	.....	497,826
57	Salt.....	7	116	9	9	5	1	92	Oo	137	Do	66	72	62	8	2	.....	1,375,849
58	Signs and advertising novelties.....	3	20	1	2	1	.....	16	Se	17	Mh	14	17	13	4	.....	.....	37,630
59	Slaughtering and meat packing.....	14	197	10	15	20	5	138	Do	168	Jo	131	108	159	9	.....	.....	841,331
60	Smelting, lead.....	3	2,074	.....	36	144	12	1,882	Ja	2,123	No	1,482	1,723	1,721	.....	2	.....	15,994,590

1 Owned power only.

2 No figures given for reasons stated under "Explanation of terms."

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal combustion engines.	Water wheels and motors. <sup>1</sup>	Electric (rented).	

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$1,300,007	\$1,483,558	\$10,852,332	\$277,062	\$200,930	\$680,525	\$57,488,374	\$4,744,806	\$87,112,300	\$24,879,180	59,536	34,020	470	3,404	21,552	12,466	1
0,202	1,000	60,226	-----	318	558	08,835	1,719	186,931	116,377	84	40	21	-----	23	58	2
2,350	1,306	22,074	-----	4,705	411	4,508	1,365	47,722	41,840	32	-----	-----	-----	32	-----	3
3,000	900	18,020	2,900	2,250	1,407	108,750	1,140	148,585	38,086	14	-----	-----	-----	14	-----	4
-----	-----	1,885	-----	-----	75	4,485	223	10,020	5,312	4	-----	4	-----	-----	-----	5
27,376	50,751	197,655	80	81,158	0,682	705,121	34,038	1,370,225	571,006	240	-----	3	-----	240	-----	6
35,645	20,200	280,374	8,000	60	7,336	40,258	73,350	625,186	502,569	2,646	537	5	60	2,044	-----	7
-----	-----	1,460	80	180	40	2,856	112	6,500	3,622	10	-----	-----	-----	10	-----	8
10,833	14,780	60,755	-----	3,432	3,527	920,633	8,895	1,074,843	145,815	347	174	9	14	150	-----	9
64,745	28,056	279,310	3,000	1,899	9,477	1,487,588	20,816	2,201,714	603,310	1,805	1,430	-----	-----	375	41	10
8,700	-----	51,588	-----	0,096	867	27,627	2,580	120,756	90,540	51	-----	4	-----	47	-----	11
8,700	-----	49,359	-----	4,508	823	23,877	2,194	107,806	81,735	42	-----	-----	-----	42	-----	12
-----	-----	2,220	-----	1,500	44	3,750	305	12,050	8,805	9	-----	4	-----	6	-----	13
5,850	3,240	110,271	-----	10	8,006	36,821	4,297	176,005	133,977	554	-----	-----	-----	554	-----	14
73,210	74,283	1,943,355	-----	-----	32,547	1,407,382	98,122	3,574,801	2,069,387	3,009	1,805	-----	40	1,194	867	15
32,850	20,628	276,709	-----	290	17,424	133,910	337,205	1,233,321	762,116	7,241	900	-----	-----	6,341	-----	16
4,200	1,000	10,217	-----	720	631	26,902	702	51,701	23,977	81	-----	3	-----	78	-----	17
75,030	130,006	327,090	500	54,086	9,728	1,521,570	27,408	2,615,172	1,066,194	1,040	505	13	-----	522	145	18
54,825	134,336	261,132	500	33,255	8,130	1,243,410	19,770	2,128,082	801,899	902	505	-----	-----	367	145	19
20,205	5,270	70,898	-----	20,831	1,508	278,100	7,020	490,084	204,205	138	-----	13	-----	125	-----	20
11,508	4,100	94,248	18,306	11,414	1,417	151,209	1,877	384,833	231,057	45	-----	-----	-----	45	-----	21
-----	-----	500	-----	890	4	248	25	7,300	7,027	1	-----	-----	-----	23	-----	22
1,108	1,000	25,830	100	4,906	433	10,209	740	73,688	50,679	23	-----	-----	-----	23	-----	23
33,920	18,927	143,942	-----	1,300	16,233	2,005,607	31,810	3,155,513	518,196	3,519	155	113	2,035	1,216	-----	24
4,355	0,108	22,562	-----	5,172	678	100,720	2,943	172,419	62,750	102	6	-----	-----	96	-----	25
05,127	30,289	389,748	2,050	16,712	11,508	753,428	35,217	1,392,830	604,185	1,228	148	21	15	1,044	-----	26
5,200	1,307	39,274	-----	1,920	378	38,803	5,255	106,141	62,083	76	-----	-----	-----	76	-----	27
59,807	28,982	350,474	2,050	14,782	11,130	714,625	29,002	1,280,080	542,102	1,182	148	21	15	968	-----	28
-----	-----	2,700	-----	130	130	3,000	25	19,220	15,295	1	-----	-----	-----	1	-----	29
4,620	1,420	48,518	12,328	4,200	293	41,984	1,000	121,217	78,143	100	-----	-----	-----	100	-----	30
22,079	38,400	140,766	-----	420	18,229	139,520	139,840	616,848	337,482	720	533	-----	-----	187	-----	31
-----	-----	600	-----	-----	20	2,635	320	7,000	4,105	-----	-----	-----	-----	-----	-----	32
21,402	36,253	2,775	-----	2,372	155	3,498	204	12,270	8,028	47	-----	-----	-----	47	-----	33
17,830	1,030	65,847	-----	1,780	2,780	279,429	3,245	523,325	245,651	-----	-----	-----	-----	-----	-----	34
2,220	1,010	40,091	-----	880	7,058	8,331	35,080	227,672	184,165	1,505	1,355	-----	40	110	240	35
1,125	2,291	30,792	100	2,245	415	10,355	308	58,793	42,040	20	-----	-----	-----	20	-----	36
-----	-----	400	-----	3,714	934	8,075	10,584	70,558	51,901	10	-----	-----	-----	10	-----	37
71,624	40,007	102,980	-----	4,335	172,367	304,315	44,783	1,345,771	990,673	887	532	5	-----	350	120	38
11,550	15,700	320,230	13,004	587	4,171	77,687	408	592,229	504,074	2,031	1,786	28	105	52	-----	39
30,440	10,039	238,801	16,808	1,085	6,553	439,338	13,880	858,848	405,630	1,644	124	23	218	1,279	-----	40
19,926	4,340	354,252	57,786	2,566	2,775	104,808	19,924	858,951	734,210	1,148	242	6	60	840	-----	41
14,160	6,792	45,443	40	-----	1,560	142,500	3,301	233,419	87,558	211	40	-----	-----	171	15	42
9,639	8,020	33,663	55	2,978	1,738	120,173	1,923	220,290	98,194	68	13	2	-----	53	-----	43
7,560	2,237	11,853	-----	8,557	229	25,661	1,088	83,029	57,180	13	-----	-----	-----	13	-----	44
1,840	4,300	7,091	-----	2,070	480	55,221	230	90,840	44,398	9	-----	-----	-----	9	-----	45
6,920	16,120	17,048	-----	160	1,621	158,276	2,631	229,090	67,183	125	115	-----	-----	10	2	46
46,606	36,313	109,825	16,569	22,666	4,533	292,551	8,031	761,891	461,309	202	-----	2	-----	200	-----	47
44,422	20,771	188,405	8,733	20,872	4,026	290,890	7,275	712,134	413,969	197	-----	2	-----	195	-----	48
2,184	9,542	-----	7,836	720	354	591	-----	24,226	23,635	-----	-----	-----	-----	-----	-----	49
-----	-----	11,420	-----	1,074	153	1,070	756	25,531	23,705	5	-----	-----	-----	5	-----	50
98,755	262,284	486,476	90,894	47,895	11,538	485,090	22,654	1,517,421	1,306,677	985	675	48	1	261	183	51
40,435	108,660	221,346	6,660	17,309	7,717	357,852	13,378	988,063	616,833	781	670	2	-----	109	163	52
40,974	42,227	261,238	13,231	28,675	3,615	125,151	8,993	683,119	548,975	204	5	40	1	152	-----	53
17,346	10,607	3,892	76,603	1,911	206	5,087	283	146,239	140,869	-----	-----	-----	-----	-----	-----	54
3,579	3,609	7,528	95	1,125	489	53,638	1,958	79,707	24,111	121	105	-----	-----	16	-----	55
12,360	10,980	83,674	-----	6,047	6,458	306,504	2,408	482,868	173,806	27	-----	-----	-----	27	-----	56
19,400	7,380	49,292	2,527	1,028	2,687	62,004	17,814	287,932	208,114	367	-----	35	-----	332	-----	57
1,800	480	13,354	6,000	1,080	476	12,444	451	42,193	29,298	14	-----	-----	-----	14	-----	58
27,481	36,524	114,717	4,212	2,159	4,832	2,659,782	15,184	3,010,078	338,712	340	62	10	-----	287	-----	59
122,128	241,311	1,795,311	-----	121,842	10,935,042	1,428,188	21,752,102	3,685,872	12,150	9,820	110	-----	-----	2,220	6,252	60

<sup>1</sup> Same number reported for one or more other months.<sup>2</sup> Same number reported throughout the year.

## MANUFACTURES—UTAH.

TABLE 29.—DETAIL STATEMENT FOR THE STATE, AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.									WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						Capital.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.				
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.	Female.			
								Maximum month.	Minimum month.								

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.																	
1	Structural ironwork, not made in steel works or rolling mills.	5	37	4	1	1	1	30	Au	38	Ap	25	31	31	.....	.....	\$33,044
2	Tobacco, cigars	21	100	21	4	3	.....	81	Ja	101	Au	68	87	66	17	4	91,266
3	Trunks and valises	5	20	7	1	.....	.....	12	.....	12	.....	.....	12	11	.....	.....	32,779
4	Wall plaster	3	72	.....	6	3	1	62	Au	70	No	50	53	58	.....	.....	374,157
5	All other industries*	94	3,004	60	125	198	27	2,594	.....	.....	.....	.....	.....	.....	.....	.....	20,203,602

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

1 SALT LAKE CITY—All industries.	300	6,362	292	325	705	108	4,931	Oc	5,267	Fe	4,406	5,185	4,237	802	53	33	\$19,246,005
2 Artificial stone products.	4	48	2	4	1		41	So	67	Ja	10	59	59				121,969
3 Bread and other bakery products.	25	208	34	4	26	8	189	My	199	Oc	183	191	150	37	1		880,005
4 Butter.	2	43	1	3	5	3	31	Jy	35	Fe	27	32	18	16			428,140
5 Carriages and wagons and repairs.	6	62	5	5			52	My	54	Ja	48	53	52		1		81,252
6 Confectionery and ice cream.	25	675	20	25	64	12	554					670	201	448	0	21	889,881
7 Confectionery.	18	537	15	15	59	11	437	No	547	My	358	547	127	394	6	20	809,912
8 Ice cream.	7	138	5	10	5	1	117	Jy	142	Fe	99	129	74	54		1	79,960
9 Copper, tin, and sheet-iron work.	22	122	32	3	3		84	So	106	Mh	72	89	80		3		87,363
10 Engraving and diecasting.	3	4					1	Ja	1	Jy	1	1	1				1,250
11 Engraving, steel and copper plate, including plate printing.	5	45	2	2	1	1	39	De	40	At	35	42	25	14	2	1	34,609
12 Food preparations not elsewhere specified.	7	50	11	2	7	1	38	Jy	51	Fe	27	41	31	9	1		84,053
13 Foundry and machine-shop products.	17	410	11	30	10	2	357	Ja	406	De	278	337	333		4		1,192,505
14 Fur goods.	3	9					4	De	8	Jy	2	0	2	7			14,950
15 Furniture, wood, including store and office fixtures.	5	61	4	3	1	1	52	So	75	No	30	43	42		1		48,403
16 Hair work.	6	12	6				0	Ja	6	Jy	6	6		6			13,010
17 Hosiery and knit goods.	4	111	1	13	16	2	79	Ja	80	Ja	55	70	11	05			153,445
18 Jewelry.	3	16	2	1			13	Ja	13	Jy	13	13	11	1	1		16,403
19 Lumber, planing-mill products, not including planing mills connected with sawmills.	8	247	1	10	6		230	De	445	Mh	117	450	448		2		235,361
20 Marble and stone work.	5	158	3	5	1		149	No	172	Ja	114	152	151		1		311,598
21 Mattresses and spring beds.	3	63		8	4		61	Ap	55	De	42	53	47	0			102,260
22 Mineral and soda waters.	6	48	3	4	9	2	30	Jy	40	De	22	38	33	1	4		82,600
23 Optical goods.	5	27	1	4	1	1	20	Oc	23	De	19	19	17	1	1		51,406
24 Patent medicines and compounds.	5	8	2				6	De	7	So	5	7	5	2			7,900
25 Printing and publishing, book and job.	31	303	30	24	27	0	216					218	187	25	0		434,757
26 Job printing.	25	277	23	23	19	4	208	Je	210	Oc	190	210	180	25	5		391,895
27 Book publishing without printing.	3	13	2	1	8	2											24,048
28 Linotype work and typesetting.	3	13	5				8	Ja	8	Jy	8	8	7		1		17,014
29 Printing and publishing, newspapers and periodicals.	41	757	10	41	313	31	356					363	295	46	17	5	1,265,988
30 Printing and publishing.	6	477	7	13	281	18	160	Oc	165	Jy	152	162	155	3	4		971,558
31 Printing, publishing, and job printing.	11	229	7	12	16	7	187	Ja	193	Au	178	189	133	39	12	5	210,282
32 Publishing without printing.	24	51	9	11	16	0	9	Au	11	So	7	12	7	4	1		84,148
33 Roofing materials, other than metal.	4	20		5	5	1	9	Oc	12	My	7	12	12				115,319
34 Saddlery and harness.	7	66	7	1	4		54	Je	61	Oc	49	51	54				143,100
35 Slaughtering and meat packing.	7	62	6	7	16	1	32	Au	35	Mh	28	35	35				237,607
36 Tobacco, cigars.	11	58	11	2	1		44	Ja	51	Au	30	44	34	8		2	43,395
37 All other industries*.	90	2,596	73	115	178	30	2,104					2,069	1,893	170	2	4	12,105,327

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

1 OGDEN.	110	2,230	88	87	138	23	1,894	Jy	2,331	De	1,686	2,048	1,577	419	24	28	\$5,381,682
2 PROVO.	33	410	26	25	24	5	330	So	307	Fe	308	400	240	154	0		900,032

\* Owned power only.

\* Same number reported throughout the year.

\* Same number reported for one or more other months.

*All other industries embrace:		Dairymen's and apiculturists' supplies.		Pottery, earthen and stone ware.	
Artificial flowers.	1	Druggists' preparations.	1	Printing materials.	1
Artificial limbs.	1	Envelopes.	1	Scales and balances.	2
Automobile bodies and parts.	1	Fancy articles, not elsewhere specified.	2	Shirts.	1
Baking powders.	1	Fertilizers.	2	Smelting, copper.	1
Baskets, and rattan and willow ware.	1	Flavoring extracts.	2	Soap.	2
Bookbinding and blank-book making.	4	Furnishing goods, men's.	1	Statuary and art goods.	1
Boots and shoes.	1	Gas and electric fixtures.	1	Stencils and brands.	1
Boxes, cigar.	1	Glass, cutting, staining, and ornamenting.	1	Sugar, beet.	7
Boxes and cartons, paper.	1	Hand stamps.	2	Surgical appliances.	1
Boxes, wooden packing.	4	Hardware.	1	Tinware, not elsewhere specified.	1
Carriage and wagon materials.	1	Lapidary work.	1	Umbrellas and canes.	1
Cheese.	12	Leather, tanned, curried, and finished.	1	Upholstering materials, uncurled hair.	1
Cleansing preparations.	1	Lithographing.	1	Vinegar.	2
Clothing, men's.	2	Mirrors, framed and unframed.	1	Window and door screens.	1
Clothing, women's.	1	Models and patterns, not including paper patterns.	2	Wirework, including woven wire fencing.	2
Coffee, roasting and grinding.	1	Oil, not elsewhere specified.	1	Wooden goods, not elsewhere specified.	2
Coke, not including gas-house coke.	1	Paints.	2	Wool pulling.	1
Condensed milk, and milk products, other than butter and cheese.	2	Perfumery and cosmetics.	1	Woolen goods.	2
		Photo-engraving.	1		

[illegible]

\$1,820	\$1,380	\$21,746	\$458	\$2,656	\$227	\$22,628	\$1,111	\$81,139	\$37,400	86				30		1
5,958	2,400	60,705		2,842	10,236	65,177	375	189,649	124,097							2
750		7,326		1,335	72	10,100	106	25,940	15,644	4				4		3
13,030	4,080	50,007		2,688	24,953	84,965	8,875	180,672	126,744	896	125		561		2	4
205,998	204,192	2,035,620	15,370	21,072	172,665	24,713,959	2,273,729	33,617,694	0,680,006	13,881	12,743	5	285	848	4,561	5

[illegible]

\$189,058 80,829	\$100,061 30,369	\$1,202,037 172,627	\$3,889 6,507	\$37,807 2,455	\$83,306 0,846	\$3,408,592 494,451	\$90,059 16,022	\$0,014,358 843,722	\$2,446,707 322,349	3,194 802	1,753 351	55 .....	60 272	1,316 179	860 5	1
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*All other industries embrace:		Clothing, women's.	1	Paints.....	1
Artificial flowers.....	1	Coffee, roasting and grinding.....	1	Perfumery and cosmetics.....	1
Artificial limbs.....	1	Coffins, burial cases, and undertaker's goods.....	2	Phot engraving.....	1
Automobile bodies.....	1	Druggists' preparations.....	1	Pickles and sauces.....	1
Automobile repairing and parts.....	2	Envelopes.....	1	Printing materials.....	1
Awnings, tents, and sails.....	4	Fancy articles, not elsewhere specified.....	2	Scales and balances.....	1
Baking powders.....	1	Fertilizers.....	2	Shirts.....	1
Bookbinding and blank-book making.....	3	Flavoring extracts.....	2	Signs and advertising novelties, other than electric.....	1
Boots and shoes.....	1	Flour-mill and gristmill products.....	2	Soap.....	1
Boxes, cigar.....	1	Furnishing goods, men's.....	1	Statuary and art goods.....	1
Boxes, fancy and paper.....	1	Gas and electric fixtures.....	1	Stencils and brands.....	1
Boxes, wooden packing.....	2	Gas, illuminating and heating.....	1	Structural iron work, not made in steel works or rolling mills.....	1
Brass and bronze products.....	2	Glass, cutting, staining, and ornamenting.....	1	Surgical appliances.....	1
Brick and tile, sewer pipe.....	1	Grease and tallow.....	2	Tinware, not elsewhere specified.....	1
Brooms, from broom corn.....	1	Hardware.....	1	Trunks and valises.....	1
Carriage and wagon materials.....	1	Ice, manufactured.....	1	Umbrellas and canes.....	1
Cars and general shop construction and repairs by team-railroad companies.....	2	Lapidary work.....	1	Upholstering materials, curled hair.....	1
Cars and general shop construction and repairs by electric-railroad companies.....	2	Liquors, malt.....	4	Vinegar.....	1
Cement.....	1	Lithographing.....	1	Window and door screens.....	1
Cleansing preparations.....	1	Mirrors, framed and unframed.....	1	Wirework.....	1
Clothing, men's.....	1	Models and patterns, not including paper patterns.....	2		
		Oil, not elsewhere specified.....	1		

# VERMONT.

By GILMAN B. HOWE.

## GENERAL STATISTICS.

**General character of the state.**—Its gross area is 9,564 square miles, of which 9,124 represent land surface. The inhabitants of the state in 1900 numbered 343,641, and in 1910, 355,956, and its estimated population in 1914 was 361,205. In respect to both area and population Vermont ranked forty-second among the states in 1910. In point of density of population it ranked twenty-fifth in that year, with 39 inhabitants per square mile; the corresponding number in 1900 was 37.7.

The urban population in 1910—that is, the population residing in cities and towns of 2,500 inhabitants or more—was 168,943, or 47.5 per cent of the total, as against 40.5 per cent in 1900. There were in Vermont in 1914 three cities estimated to have more than 10,000 inhabitants, namely, Barre, Burlington, and Rutland. The aggregate population of these three cities was 47,370 and formed 13.1 per cent of the estimated total population of Vermont in that year.

The steam-railway mileage in 1914 was 1,073, and the electric-railway mileage in 1912 was 97. In addition, Lake Champlain, which forms a part of the western boundary, affords excellent shipping facilities, and, together with its canal connections with the Hudson and St. Lawrence Rivers, forms an important factor in the transportation system of the state.

The value of farm crops in 1909 was \$27,446,836, of which more than one-half—\$16,335,530—represented hay and forage.

At the United States census of mines and quarries, in 1909, the total mineral output of Vermont was valued at \$8,221,323, the principal products being marble, \$3,277,651, and granite, \$2,829,522.

According to the annual report of the United States Geological Survey, the total value of all minerals produced in the state in 1914 was \$8,665,867, the leading items being marble, \$3,490,971, and granite, \$3,120,452. Vermont ranked first among the states in that year in the production of both these minerals, with 43 per cent and 15.6 per cent, respectively, of the total values reported for the entire United States.

**Importance and growth of manufactures.**—In 1914, measured by the value of products of its manufacturing industries—\$76,991,000—Vermont ranked fortieth among the states and, with an average of 32,704 wage earners engaged in such industries, it ranked thirty-fourth in this respect. In 1909 the state ranked thirty-eighth in value of products and thirty-fourth in average number of wage earners. In 1914, as compared with the total value of products of manufactures for the United States, Vermont's proportion was three-tenths of 1 per cent. The corresponding proportions for 1909 and 1904 were three-tenths of 1 per cent and four-tenths of 1 per cent, respectively.

Table 1 gives the more important figures relative to all classes of manufactures combined in the state of Vermont, for the censuses of 1914, 1909, 1904, and 1899, together with the percentages of increase from census to census.

Table 1	MANUFACTURING INDUSTRIES.				PER CENT OF INCREASE. <sup>1</sup>		
	1914	1909	1904	1899	1909-1914	1904-1909	1899-1904
Number of establishments.....	1,772	1,958	1,699	1,938	-9.6	15.2	-12.3
Persons engaged.....	37,217	38,580	37,015	(2)	-3.6	4.2	.....
Proprietors and firm members.....	1,787	2,113	1,850	(2)	-15.4	13.8	.....
Salaried employees.....	2,720	2,679	2,053	1,695	1.8	30.5	21.1
Wage earners (average number).....	32,704	23,788	33,106	28,179	-3.2	2.1	17.5
Primary horsepower.....	173,937	159,445	140,010	126,124	9.1	13.4	11.5
Capital.....	\$70,840,775	\$73,470,107	\$62,658,741	\$43,499,633	8.7	17.3	44.0
Salaries and wages.....	22,001,082	20,075,131	17,323,767	13,037,062	9.6	15.9	32.9
Salaries.....	3,394,587	2,806,429	2,102,708	1,610,514	20.7	33.3	30.6
Wages.....	18,617,075	17,271,702	15,221,059	11,426,548	7.8	13.5	33.2
Paid for contract work.....	1,162,281	691,481	700,703	(2)	96.5	-15.6	.....
Rent and taxes (including internal revenue).....	832,917	509,084	450,721	(2)	63.6	12.9	.....
Cost of materials.....	42,705,720	34,823,728	32,429,852	20,384,812	22.6	7.4	22.9
Value of products.....	70,590,974	68,309,824	63,083,011	51,515,228	12.7	8.3	22.5
Value added by manufacture (value of products less cost of materials).....	34,286,254	33,487,096	30,653,759	25,130,410	2.4	9.2	22.0

<sup>1</sup> A minus sign (—) denotes decrease.

<sup>2</sup> Figures not available.

<sup>3</sup> Exclusive of internal revenue.

Although the value of products and cost of materials show greater increases from 1909 to 1914 than from 1904 to 1909, all the remaining items, except

rent and taxes, show smaller percentages of increase, while several show actual decreases. The number of establishments reported at the census of 1914 repre-

sented a decrease of 186, or 9.5 per cent, as compared with the corresponding total for 1909, due chiefly to the decreases in the lumber and the marble and stone work industries. The largest percentage of decrease, 15.4 per cent, during this five-year period was in the number of proprietors and firm members. While most of this was due to the falling off in number of establishments in the two industries just referred to, which were chiefly of individual and partnership organization, no doubt it was in some degree affected by the changes in character of ownership as shown in Table 15. The small decrease, 3.2 per cent, in the

average number of wage earners is more than accounted for by the loss shown in the two industries, lumber and marble and stone work. The value added by manufacture, although greater in amount at each of the successive censuses for which figures are given in the table, shows a smaller percentage of increase for each succeeding five-year period—22 per cent from 1899 to 1904, 9.2 per cent from 1904 to 1909, and 2.4 per cent from 1909 to 1914.

Table 2 shows the relative importance of the leading manufacturing industries in 1914, and the increases for the three five-year periods from 1899 to 1914.

Table 2

Table 2	CENSUS OF 1914.						PER CENT OF INCREASE. <sup>1</sup>									
INDUSTRY.	Number of establishments.	Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.		
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904
All industries.....	1,772	32,704	100.0	\$76,090,974	100.0	\$34,285,254	100.0	-3.2	2.1	17.5	12.7	8.3	22.5	2.4	9.2	22.0
Marble and stone work.....	270	9,018	27.6	12,605,417	16.4	8,921,013	26.0	-13.4	28.0	73.5	1.7	20.5	50.0	-0.7	30.6	68.0
Lumber and timber products.....	510	4,108	12.6	8,768,453	11.4	4,787,759	14.0	-14.7	-11.2	-0.3	7.7	-0.3	7.7	-7.3	13.8	13.8
Butter, cheese, and condensed milk.....	173	471	1.4	8,095,915	11.3	719,025	2.1	-0.2	.....	7.2	.....	.....	.....	-31.8	.....	.....
Paper and wood pulp.....	23	1,264	3.9	4,776,387	6.2	1,772,022	5.2	22.7	-19.5	5.3	22.4	1.0	13.2	22.5	12.1	-24.1
Woolen and worsted goods.....	17	2,220	6.8	4,634,593	6.0	1,645,981	4.8	-3.0	2.0	3.1	-4.3	.....	.....	1.7	-15.0	.....
Flour-mill and gristmill products.....	125	170	0.5	4,142,854	5.4	483,804	1.4	14.7	-15.7	8.8	0.2	28.0	15.7	-20.0	81.1	-30.8
Food preparations.....	11	141	0.4	3,497,741	4.5	470,938	1.4	.....	.....	.....	611.0	.....	.....	275.0	.....	.....
Foundry and machine-shop products.....	40	1,873	5.7	3,428,162	4.5	2,300,340	6.9	0.7	2.3	27.2	-8.7	11.1	42.5	-2.2	-0.7	61.3
Hosiery and knit goods.....	7	963	2.9	2,164,897	2.8	760,935	2.2	1.8	3.3	-12.0	24.0	-12.2	8.4	15.8	-15.0	7.4
Furniture.....	16	1,035	3.2	1,642,780	2.1	889,054	2.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clothing, men's, including shirts.....	10	988	3.0	1,441,043	1.9	705,536	2.1	-22.0	1.0	.....	13.2	5.6	.....	3.4	12.2	.....
Bread and other bakery products.....	85	357	1.1	1,402,063	1.8	589,941	1.7	47.5	20.4	20.4	41.1	90.2	19.7	59.5	66.7	5.2
Cars and general shop construction and repairs by steam-railroad companies.....	5	1,345	4.1	1,354,071	1.8	777,354	2.3	35.6	10.1	0.0	19.4	32.0	4.2	28.2	25.5	1.7
Printing and publishing.....	111	651	2.0	1,242,044	1.6	946,152	2.8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Patent medicines and compounds.....	12	119	0.4	1,018,651	1.3	691,828	2.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Agricultural implements.....	0	311	1.0	666,294	0.9	380,127	1.1	-13.6	45.7	17.1	10.6	31.7	10.5	24.5	10.2	26.2
Clothing, women's.....	7	387	1.2	601,201	0.9	338,055	1.0	16.2	-39.0	170.3	37.4	-30.3	264.6	55.0	-20.8	250.0
Copper, tin, and sheet-iron products.....	17	113	0.3	477,730	0.6	190,830	0.6	-24.2	.....	.....	12.5	.....	.....	-10.5	.....	.....
Wood, turned and carved.....	33	361	1.1	413,764	0.5	248,258	0.7	-7.4	.....	.....	-10.6	.....	.....	-13.0	.....	.....
Canning and preserving (fruits and vegetables).....	0	95	0.3	402,330	0.5	174,504	0.5	.....	107.0	-55.5	.....	108.3	-40.6	.....	93.3	-39.4
Confectionery.....	4	151	0.5	399,793	0.5	148,462	0.4	4.1	13.3	24.3	12.4	44.7	-0.8	4.2	20.1	-20.3
Gas, illuminating and heating.....	0	59	0.2	377,262	0.4	214,863	0.6	.....	.....	.....	21.2	115.5	81.7	20.8	95.6	78.4
Cooperage and wooden goods, not elsewhere specified.....	15	260	0.8	322,037	0.4	214,647	0.6	-50.1	34.8	250.5	-53.5	55.7	178.1	-52.5	53.6	183.7
All other industries.....	246	6,220	19.0	12,432,504	16.2	5,828,320	17.0	.....	.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Percentages are based on figures in Table 31; a minus sign (—) denotes decrease; percentages are omitted where base is less than 100 or where comparable figures can not be given.

<sup>2</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.

<sup>3</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.

Separate statistics are presented for 23 industries, or industry groups, for each of which products valued at more than \$300,000 were reported for 1914. These industries include 1 with products exceeding \$10,000,000, 2 with products between \$5,000,000 and \$10,000,000 in value, 12 between \$1,000,000 and \$5,000,000, and 8 with products valued at less than \$1,000,000. Among those included under the head of "all other industries," the statistics for which can not be shown separately without the possibility of disclosing the operations of individual establishments, are a number which have products exceeding in value some for which figures are shown in the table, as follows: Ammunition; brushes; dairymen's supplies; leather, tanned, curried, and finished; musical instru-

ments, organs; musical instruments, piano and organ materials; scales and balances; and wool shoddy. Cotton goods, shown separately for 1914, in Table 32, is omitted from this table because statistics for 1909 could not be shown separately without disclosure of individual operations. The manufacture of scales and balances, in which Vermont occupies a leading position, is the most important of these industries.

*Marble and stone work.*—This is the most important industry in Vermont, not only as to value of products, but also in number of wage earners employed. In this connection it should be understood that reports for quarries were taken at the census of manufactures only for such of them as were engaged in dressing the stone. At the 1914 census of manufactures

the marble and stone work industry, which includes not only the operations of quarries where the stone is dressed, but also the dressing of marble and stone outside of quarries, reported 16.4 per cent of the total value of products for all manufactures in the state and 27.6 per cent of the average number of wage earners. The value of products reported for this industry at the census of 1914 was subdivided as follows: Marble and stone work of all kinds, chiefly granite and marble, but exclusive of slate, \$11,066,400; roofing slate, \$1,123,492; and all other slate products, \$415,525. Monuments and tombstones and stone for building purposes were the chief products in this industry. The value of marble and stone work, exclusive of slate, by kinds of stone, was reported as follows: Granite, \$7,122,252; marble, \$3,474,728; marble and granite, not separable \$454,093; and soapstone, \$15,327. During the five-year period 1909-1914 there was a slight increase in the total value of products from \$12,395,000 to \$12,605,000, or 1.7 per cent. The number of establishments, however, decreased from 342 to 276, or 19.3 per cent; the average number of wage earners from 10,411 to 9,018, or 13.4 per cent; and the value added by manufacture from \$9,878,000 to \$8,922,000, or 9.7 per cent.

*Lumber and timber products.*—This industry, which in Table 2 embraces not only logging operations, sawmills, and planing mills, but also wooden box factories and the pulp-wood industry, was second in importance in 1914, although, as compared with 1909, showing an actual falling off in all items except wages and value of products. As the forests are depleted in the older states, a decrease naturally follows, and this is evident in the case of Vermont, when the statistics for the ten-year period 1904-1914 are considered. In 1904 the value of products was \$9,477,000 and the average number of wage earners was 5,614; but in 1914, notwithstanding the advance in the value of lumber, the value of products was only \$8,768,000 and the number of wage earners 4,108, the percentage of decrease for the decade being 7.5 and 26.8 per cent, respectively.

*Butter, cheese, and condensed milk.*—Third in importance in the state at the last three censuses, this industry, although showing a small actual decrease from 1909 to 1914 in number of establishments and average number of wage earners, showed increases in amount paid in wages, cost of materials, and value of products. The decrease in number of establishments has been noticeable since 1904, when 220 establishments were reported, and is probably due to a greater centralization of the industry, causing the abandonment of many small local creameries. For the five-year period 1909-1914 the average number of wage earners decreased 48, or 9.2 per cent, while the value of products increased \$584,000, or 7.2 per cent.

*Textiles.*—In Vermont these manufactures, include woolen and worsted goods, hosiery and knit goods,

and cotton goods, and for each there was an increase in the value of products from 1909 to 1914. Of the three branches of the textile industries, the manufacture of woolen and worsted goods is much the most important. During the five-year period 1909-1914 the value of products for this industry shows an increase of \$138,000, or 3.1 per cent, and the value added by manufacture, \$28,000 or 1.7 per cent. The average number of wage earners, however, decreased by 68, or 3 per cent, and the same number of establishments reported at both censuses. For hosiery and knit goods during the same five-year period there were much more pronounced increases in value of products and value added by manufacture, amounting to \$419,000, or 24 per cent, and \$104,000, of 15.8 per cent, respectively; but the increase in number of wage earners was slight, being only 17, or 1.8 per cent.

*Paper and wood pulp.*—This industry was fourth in importance, measured by value of products, in Vermont in 1914, having displaced woolen and worsted goods, which industry now ranks fifth. Although the number of establishments reporting in 1914 was smaller by 2 than the number in 1909, decided increases appeared in other respects, as follows: Average number of wage earners, 234, or 22.7 per cent; value of products, \$874,000, or 22.4 per cent; and the value added by manufacture, \$325,000, or 22.5 per cent. In horsepower reported, the mills in this industry, with a total of 42,066 horsepower, led all other industries in the state.

*Flour-mill and gristmill products.*—This industry, which excludes custom mills grinding for toll or local consumption, measured by value of products, ranked fifth in 1909, but dropped to sixth place in 1914. There were slight increases in value of products and average number of wage earners during the five-year period, together with a decrease in number of establishments. This decrease was in harmony with the conditions prevailing not only in many other states but in the industry as a whole in the United States, due largely to the abandonment of a large number of small mills.

The industries in this table are arranged in the order of their importance by value of products, but would vary considerably if based on average number of wage earners or value added by manufacture. Marble and stone work, lumber and timber products, and hosiery and knit goods are the only industries which ranked alike in all three respects. Butter, cheese, and condensed milk, third in value of products, was eleventh in number of wage earners and tenth in value added by manufacture. Woolen and worsted goods, fifth in value of products and value added by manufacture, was third in average number of wage earners. Flour-mill and gristmill products, sixth in value of products, was seventeenth in number of wage earners and fourteenth in value added by manufacture. The manufacture of flour-mill and gristmill products con-



sists largely in the simple process of grinding grain, requiring few employees, while the value added to the raw material by manufacture, as compared with the corresponding value for most other industries, is very small. The manufacture of food preparations is another industry which requires comparatively few employees and adds little value by the manufacturing process, ranking seventh in value of products, but nineteenth in average number of wage earners and fifteenth in value added by manufacture. On the other hand, the foundry and machine-shop industry, ranking eighth in value of products, was fourth in average number of wage earners and third in value added by manufacture.

In rank according to value of products there were a number of changes in 1914 as compared with 1909. Of the more important industries shown in the table, marble and stone work, lumber and timber products, and butter, cheese, and condensed milk held the same rank in value of products at both censuses. Paper and wood pulp, woolen and worsted goods, and flour-mill and gristmill products, ranking fourth, fifth, and sixth in 1914, were sixth, fourth, and fifth, respectively, in 1909. Food preparations, holding seventh place in 1914, ranked nineteenth at the census of 1909. Clothing, men's, ranked eleventh at both censuses. For the remainder of these industries slight changes are noticeable from the earlier census to the later.

**Persons engaged in manufacturing industries.**—Table 3 shows, for 1909 and 1914, the number of persons engaged in manufactures, distributed by sex, the average number of wage earners being distributed also by age. The sex and age classification of the average number of wage earners in this and other

tables is an estimate obtained by the method described in the "Explanation of terms" given at the beginning of this bulletin.

**Table 3**

CLASS.	Cen- sus year.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.				
		Total.	Male.	Fe- male.	Per cent of total.	
					Male.	Fe- male.
All classes.....	1914 1909	37,217 38,590	32,591 33,305	4,626 5,275	87.6 86.3	12.4 13.7
Proprietors and officials.....	1914 1909	2,756 3,088	2,600 3,013	156 75	97.8 97.6	2.2 2.4
Proprietors and firm members...	1914 1909	1,787 2,113	1,743 2,053	44 60	97.5 97.2	2.5 2.8
Salaried officers of corporations...	1914 1909	333 302	320 293	7 9	97.9 97.0	2.1 3.0
Superintendents and managers...	1914 1909	636 673	627 667	9 6	98.6 99.1	1.4 0.9
Clerks and other subordinate salaried employees.	1914 1909	1,757 1,704	1,171 1,202	586 502	66.6 70.5	33.4 29.5
Wage earners (average number)....	1914 1909	32,704 33,788	28,724 29,000	3,980 4,608	87.8 86.1	12.2 13.9
16 years of age and over.....	1914 1909	32,652 33,577	28,682 28,046	3,970 4,631	87.8 86.2	12.2 13.8
Under 16 years of age.....	1914 1909	52 211	42 144	10 67	80.8 68.2	19.2 31.8

In 1914 the total number of persons engaged in manufactures was 37,217, of whom 32,704, or seven-eighths, were wage earners, 2,756 were proprietors and officials, and 1,757 were clerks. Of the wage earners, 16 years of age and over, 28,682, or seven-eighths, were males and 3,970, or one-eighth, were females. Corresponding figures for individual industries will be found in Table 32.

Table 4 shows, for persons engaged in manufactures, the percentages of increase from 1909 to 1914 and the per cent distribution at the two censuses:

**Table 4**

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
	Per cent of increase, <sup>1</sup> 1909-1914.			Per cent distribution.					
	Total.	Male.	Female.	Total.		Male.		Female.	
				1914	1909	1914	1909	1914	1909
All classes.....	-3.5	-2.1	-12.3	100.0	100.0	100.0	100.0	100.0	100.0
Proprietors and officials.....	-10.8	-10.5	.....	7.4	8.0	8.3	9.0	1.3	1.4
Proprietors and firm members.....	-15.4	-15.1	.....	4.8	5.5	5.3	6.2	1.0	1.1
Salaried officers of corporations.....	10.3	11.3	.....	0.9	0.8	1.0	0.9	0.2	0.2
Superintendents and managers.....	-5.5	-6.0	.....	1.7	1.7	1.9	2.0	0.2	0.1
Clerks and other subordinate salaried employees.....	3.1	-2.6	16.7	4.7	4.4	3.6	3.6	12.7	9.5
Wage earners (average number).....	-3.2	-1.3	-15.3	87.9	87.6	88.1	87.3	86.0	80.1
16 years of age and over.....	-2.8	-0.9	-14.3	87.7	87.0	88.0	86.9	85.8	87.8
Under 16 years of age.....	-75.4	-70.8	.....	0.1	0.5	0.1	0.4	0.2	1.3

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.

This table shows decreases for the five-year period in the total numbers of the several classes of employees with the exceptions of salaried officers of corporations and clerks and other subordinate salaried employees. The largest percentage of decrease for both sexes combined, 75.4, is shown for wage earners under 16 years of age, but the proportion which this class formed of the total number of wage earners was insignificant,

being two-tenths of 1 per cent in 1914 and six-tenths of 1 per cent in 1909. Wage earners over 16 years of age formed by far the largest class, 87.7 per cent, of the total number of persons engaged in manufacturing industries in the state in 1914 and 87 per cent in 1909.

Table 5 shows, for the three main classes of persons engaged in manufactures, the number in each class and

the per cent distribution for 1914, 1909, and 1904, and the increase for the two five-year periods.

**Table 5**

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.						
	Number.			Per cent distribution.			Per cent of increase. <sup>1</sup>
	1914	1909	1904	1914	1909	1904	1909-1914
Total.....	37,217	38,580	37,015	100.0	100.0	100.0	-3.5
Proprietors and firm members.....	1,787	2,113	1,856	4.8	5.5	5.0	-15.4
Salaried employees.....	2,726	2,679	2,053	7.3	6.9	5.5	1.8
Wage earners (av. number).....	32,704	33,788	33,106	87.9	87.6	89.4	-3.2

<sup>1</sup> A minus sign (-) denotes decrease.

Salaried employees show an increase at each successive census, although much the greater for the five-year period 1904-1909. Each of the other two classes and the total for all classes combined show increases for the five-year period 1904-1909 and decreases for the five-year period 1909-1914.

Table 6 shows, for 1914, 1909, and 1904, the average number of wage earners employed, for all industries combined, with the per cent distribution of males and females 16 years of age and over and of children under 16 years of age. The table also shows, for some of the important industries separately, a similar distribution of wage earners for 1914 and 1909.

Table 6

INDUSTRY.	Census year.	WAGE EARNERS.					INDUSTRY.	Census year.	WAGE EARNERS.						
		Average number.	Per cent of total.			Under 16 years of age.			Average number.	Per cent of total.			Under 16 years of age.		
			16 years of age and over.							16 years of age and over.					
			Male.	Female.							Male.	Female.			
All industries.....	1914 1909 1904	32,704 33,788 33,106	87.7 85.7 85.5	12.1 13.7 13.8	0.2 0.6 0.7		Furniture.....	1914 1909	1,035 1,119	97.3 98.6	2.2 0.1	0.5 1.3			
Agricultural implements.....	1914 1909	311 360	97.4 97.2	2.6 1.1	1.7		Hosiery and knit goods.....	1914 1909	963 946	26.0 34.9	63.7 64.6	0.3 0.5			
Bread and other bakery products.....	1914 1909	357 242	83.2 78.5	15.1 15.3	1.7 6.2		Lumber and timber products.....	1914 1909	4,108 4,790	99.2 98.2	0.8 1.4	(1) 0.4			
Butter, cheese, and condensed milk.....	1914 1909	471 510	95.8 95.4	3.4 4.2	0.8 0.4		Marble and stone work.....	1914 1909	9,018 10,411	99.9 99.8	(1) (1)	0.1 0.2			
Cars and general shop construction and repairs by steam-railroad companies.....	1914 1909	1,345 992	100.0 100.0				Paper and wood pulp.....	1914 1909	1,204 1,030	95.2 93.0	4.8 7.0	-----			
Clothing, men's, including shirts.....	1914 1909	988 1,281	14.4 11.0	85.2 89.0	0.4		Printing and publishing.....	1914 1909	651 666	77.1 70.9	22.7 28.8	0.2 0.3			
Clothing, women's.....	1914 1909	387 333	8.5 10.2	91.5 89.8			Toys and games.....	1914 1909	160 103	68.1 78.6	31.9 12.6	----- 8.7			
Confectionery.....	1914 1909	151 145	41.1 41.4	58.9 58.6			Wood, turned and carved.....	1914 1909	361 390	94.5 89.0	5.0 9.7	0. 1.3			
Cooperage and wooden goods, not elsewhere specified.....	1914 1909	260 635	91.9 79.4	8.1 18.7	1.9		Woolen and worsted goods.....	1914 1909	2,226 2,294	71.5 60.9	28.5 37.6	(1) 1.4			
Flour-mill and gristmill products.....	1914 1909	179 156	99.4 100.0		0.6		All other industries.....	1914 1909	6,596 5,516	85.1 80.2	14.6 17.6	0.3 2.2			
Foundry and machine-shop products.....	1914 1909	1,873 1,800	98.0 97.1	2.0 2.8	0.1										

<sup>1</sup> Less than one-tenth of 1 per cent.

For all industries combined, the proportion of male wage earners over 16 years of age has been greater at each successive census, while the proportions for both females over 16 years of age and children under 16 have decreased. The percentage for males 16 years of age and over increased from 85.7 in 1909 to 87.7 in 1914, and during the same period the proportions for females 16 years of age and over and for children under 16 decreased from 13.7 to 12.1 and from six-tenths of 1 per cent to two-tenths of 1 per cent, respectively.

In 1914, as compared with 1909, of the 19 industries for which separate figures are given in this table, 13 show an increased proportion of males and 5 an increased proportion of females, while but 1 shows an increase in the proportion of children under 16 years

of age. Four of the industries that gave employment to children under 16 years of age in 1909 reported no employees of this class for 1914.

In the manufacture of men's clothing and women's clothing in 1914, about nine-tenths of the wage earners 16 years of age and over were women; and in the manufacture of confectionery and of hosiery and knit goods, although the proportion was smaller, the females also outnumbered the males. In the manufacture of toys and games, there was an increase in the proportion of female wage earners 16 years of age and over in 1914 as compared with 1909. In 1909 children under 16 years of age formed 8.7 per cent of the total average number of wage earners for the last-named industry, but in 1914 none of this class were reported.

Table 7 shows the average number of wage earners employed in each of the three cities having a population of more than 10,000, distributed according to age periods and in the case of those 16 years and over, according to sex, for 1914, 1909, and 1904.

SEX AND AGE.	Census year.	AVERAGE NUMBER OF WAGE EARNERS IN—		
		Barre.	Burlington.	Rutland.
Total.....	1914	2,306	2,132	1,771
	1909	2,340	2,371	1,636
	1904	2,198	2,300	1,803
16 years of age and over:				
Male.....	1914	2,355	1,452	1,531
	1909	2,325	1,601	1,245
	1904	2,195	1,610	1,350
Female.....	1914	9	878	231
	1909	3	740	390
	1904	2	652	452
Under 16 years of age.....	1914	2	2	9
	1909	12	30	1
	1904	1	20	1
Per cent of total:				
16 years of age and over—				
Male.....	1914	99.5	68.1	85.4
	1909	99.4	67.5	76.1
	1904	99.8	70.4	74.9
Female.....	1914	0.4	31.8	13.0
	1909	0.1	31.2	23.8
	1904	0.1	28.3	25.1
Under 16 years of age.....	1914	0.1	0.1	0.5
	1909	0.5	1.3	0.1
	1904	( <sup>1</sup> )	1.3	0.1

<sup>1</sup> Less than one-tenth of 1 per cent.

Barre shows an increase during each of the five-year periods in the numbers of both males and females 16 years of age and over, but for the number under 16 years there was a decrease during the five-year period 1909–1914. In this city, however, the number of female wage earners over 16 years of age and of children under 16 years was insignificant, the two classes combined forming but one-tenth of 1 per cent of the total in 1904, six-tenths of 1 per cent in 1909, and five-tenths of 1 per cent in 1914. The preponderance of males is due to the fact that marble and stone work, the principal industry in Barre, furnishing employment to more than nine-tenths of the average number of wage earners engaged in manufactures in the city, reported only three females.

Burlington shows a decrease of 239 in the total average number of wage earners from 1909 to 1914, each of the three classes taking part in this decrease. Several of the most important industries shared in this loss, while one industry engaged in the manufacture of photographic supplies in 1909, and employing a considerable number of wage earners, had left the city in 1914. Among the three cities, the proportion of male wage earners 16 years of age and over was the smallest, and of females over 16 years of age the largest, in Burlington. During the five-year period 1909–1914 the proportion of males 16 years of age and over increased from 67.5 per cent to 68.1 per cent, and that for females 16 years of age and over, from 31.2 per cent to 31.8 per cent, while the proportion of children

under 16 years of age decreased from 1.3 per cent to one-tenth of 1 per cent.

Rutland shows an actual increase of 135 in the total average number of wage earners for the five-year period 1909–1914. There was a decided increase during this period in the proportion of male wage earners over 16 years of age and a corresponding decrease in the proportion of females. The number under 16 years of age, although greater in 1914 than in 1909, was so small that it scarcely had a perceptible effect on the percentages from census to census.

Table 8 shows, for Barre, Burlington, and Rutland, the percentages of increase in the average numbers of wage earners, for which totals are given in the preceding table for 1914, 1909, and 1904.

CITY.	PER CENT OF INCREASE IN AVERAGE NUMBER OF WAGE EARNERS. <sup>1</sup>				
	Period.	Total.	16 years of age and over.		Under 16 years of age.
			Male.	Female.	
Barre.....	1904-1914	7.6	7.3	.....	.....
	1909-1914	1.1	1.3	.....	.....
	1904-1909	0.5	5.0	.....	.....
Burlington.....	1904-1914	-7.3	-10.3	4.0	.....
	1909-1914	-10.1	-9.3	-8.4	.....
	1904-1909	3.1	-1.1	13.5	.....
Rutland.....	1904-1914	-1.8	13.4	-48.9	.....
	1909-1914	8.3	23.0	-40.8	.....
	1904-1909	-9.3	-7.8	-13.7	.....

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100.

In Barre, during the ten-year period 1904–1914, the total average number of wage earners increased by 7.6 per cent, and the average number of males 16 years of age and over, by 7.3 per cent. For the five-year period 1909–1914 the increase for all classes of wage earners amounted to 1.1 per cent, and for males 16 years and over, to 1.3 per cent.

Burlington shows, for the ten-year period 1904–1914, a decrease of 7.3 per cent, and for the five-year period 1909–1914, a decrease of 10.1 per cent, in the total average number of wage earners employed. During the ten-year period the average number of male wage earners 16 years of age and over decreased 10.3 per cent, and during the same period the average number of female wage earners 16 years of age and over increased 4 per cent, but decreased by 8.4 per cent during the five-year period 1909–1914.

For Rutland there is shown, for the ten-year period, a decrease of 1.8 per cent in the total average number of wage earners, but for the five-year period 1909–1914 there was a gain of 8.3 per cent. During the ten-year period the average number of male wage earners 16 years of age and over increased by 13.4 per cent, while the average number of female wage earners 16 years of age and over decreased by 48.9 per cent. For the five-year period 1909–1914 the corresponding totals

represent an increase of 23 per cent and a decrease of 40.8 per cent, respectively.

**Wage earners employed, by months.**—Table 9 gives, for all industries combined, a comparative statement of the total number of wage earners employed on the 15th of each month, or the nearest representative day, for the years 1914 and 1909, and for 1904 the average number employed during each month, together with the percentage which the number reported for each month forms of the greatest number reported for any month.

MONTH.	WAGE EARNERS IN MANUFACTURING INDUSTRIES.					
	Number. <sup>1</sup>			Per cent of maximum.		
	1914	1909	1904	1914	1909	1904
January.....	33,288	33,013	32,576	97.4	95.2	95.3
February.....	33,273	33,710	33,282	97.3	97.2	97.3
March.....	34,155	34,257	33,954	99.9	98.8	99.3
April.....	34,194	34,288	34,189	100.0	98.9	100.0
May.....	34,125	34,317	34,160	99.8	99.0	99.0
June.....	33,254	34,134	33,387	97.3	98.4	97.7
July.....	31,792	32,875	32,032	93.0	94.8	93.7
August.....	31,213	33,350	31,654	91.3	96.2	92.6
September.....	32,208	34,098	32,707	94.2	98.3	95.7
October.....	31,615	34,392	33,194	92.5	99.2	97.1
November.....	31,571	34,677	33,231	92.3	100.0	97.2
December.....	31,760	32,342	32,906	92.9	93.3	96.2

<sup>1</sup> The figures for 1914 and 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during the month.

For 1914 and 1904 the spring months show the greatest activity in the combined industries of the state, the maximum number of wage earners appearing for April and the minimum for August in both years. The year 1909 shows the least fluctuation in the number of wage earners employed, but shows a different season of activity, the maximum month being November, whereas in 1914 the employment of wage earners was comparatively small during the later months of the year. The greatest difference between the maximum and minimum months in any one of the three census years was 2,981 in 1914. The average monthly employment of wage earners in 1914 was 32,704 and in 1909, 33,788.

Table 10 gives for the state as a whole and for a number of selected industries, a comparative statement, for the years 1914 and 1909, showing the total average number of wage earners employed, the number by months of maximum and minimum employment, and the percentage which the minimum forms of the maximum.

In 1914 the average number of wage earners, for all industries combined, was 32,704, representing a decrease of 1,084 as compared with 33,788 in 1909; but a comparison of the selected industries covered by the table shows a wide diversity of increase and decrease during this period in the number of wage earners employed. Marble and stone work, by far the largest manufacturing industry in the state, shows a decrease of 1,393 in the average number of wage earners, but less fluctuation in monthly employment in

the later year than in the earlier, the percentage which the minimum formed of the maximum in 1914 being 90.3 per cent, compared with 65.9 in 1909. On the other hand, the woolen and worsted goods industry, for which there appears a slight decrease in average number of wage earners during the five-year period 1909-1914, showed a much greater fluctuation in 1914 than in 1909, the percentages which the minimum formed of the maximum being 62.9 and 85.4 per cent, respectively. Bread and other bakery products, cars and general shop construction and repairs by steam railroad companies, foundry and machine-shop products, furniture and refrigerators, and the printing and publishing industries show the most steady employment of wage earners.

Table 10

INDUSTRY.	Cen- sus year.	WAGE EARNERS.					
		Average num- ber.	Maximum.		Minimum.		
			Month.	Num- ber.	Month.	Num- ber.	Per cent of maxi- mum.
All industries.....	1914 1909	32,704 33,788	Apr. Nov.	34,194 34,677	Aug. Dec.	31,213 32,342	91.3 93.3
Agricultural implements....	1914 1909	311 360	Jan. Apr.	336 393	July Aug.	235 298	70.8 75.8
Bread and other bakery products.	1914 1909	357 242	Aug. June	378 257	Feb. Jan.	335 227	88.6 88.3
Butter, cheese, and con- densed milk.	1914 1909	471 519	June July	570 620	Feb. Feb.	381 428	66.8 69.0
Cars and general shop con- struction and repairs by steam-railroad companies.	1914 1909	1,345 992	Mar. Sept.	1,411 1,030	Sept. July	1,253 956	88.8 92.8
Clothing, men's, including shirts.	1914 1909	988 1,281	Feb. Dec.	1,102 1,423	Oct. Sept.	731 1,107	66.3 77.8
Clothing, women's.....	1914 1909	387 333	Apr. Dec.	448 407	Aug. June	285 290	63.6 71.3
Confectionery.....	1914 1909	151 145	Oct. Nov.	172 183	June July	132 114	76.7 62.3
Cooperage and wooden goods, not elsewhere specified.	1914 1909	260 635	Mar. Dec.	325 691	Dec. July	160 556	49.2 80.5
Flour-mill and gristmill products.	1914 1909	179 156	Dec. Mar.	183 166	July Sept.	174 145	95.1 87.3
Foundry and machine-shop products.	1914 1909	1,873 1,860	Apr. Dec.	2,039 2,122	Oct. May	1,671 1,691	82.0 79.7
Furniture.....	1914 1909	1,035 1,119	Mar. Dec.	1,123 1,261	Dec. July	945 1,026	84.1 81.4
Hosiery and knit goods.....	1914 1909	963 946	May Nov.	1,090 1,000	Sept. Aug.	795 893	72.9 86.3
Lumber and timber products	1914 1909	4,108 4,700	May Dec.	4,713 5,460	Sept. Aug.	3,471 3,866	73.6 70.8
Marble and stone work.....	1914 1909	9,018 10,411	Aug. Aug.	9,290 11,186	Dec. Dec.	8,391 7,372	90.3 65.9
Paper and wood pulp.....	1914 1909	1,204 1,030	Sept. Mar.	1,429 1,133	Aug. Aug.	950 885	66.5 78.1
Printing and publishing.....	1914 1909	651 665	May Dec.	667 699	Dec. Aug.	634 649	95.1 92.8
Toys and games.....	1914 1909	160 103	Oct. Oct.	188 121	Aug. Jan.	135 83	71.8 68.6
Wood, turned and carved...	1914 1909	351 390	Feb. Jan.	417 411	July Sept.	324 354	77.7 86.1
Woolen and worsted goods..	1914 1909	2,226 2,294	Dec. Dec.	2,929 2,508	Feb. Aug.	1,843 2,143	62.9 85.4

Table 11 gives the total average number of wage earners employed during 1914, together with the total number employed on the 15th of each month, or the

nearest representative day, for the combined industries of the state, for a number of selected industries, and for the total industries of each of the three cities having a population of more than 10,000.

Of the selected industries, cooperage and wooden goods, while comparatively a small industry in the state, shows the greatest degree of fluctuation, the number of wage earners in December being but 49.2

per cent of the number in March. The least fluctuation is shown for flour-mill and gristmill products and for printing and publishing, for which industries the proportion which the minimum formed of the maximum was 95.1 per cent. Of the three cities, Rutland shows much the greatest fluctuation, the proportion that the minimum formed of the maximum for this city being 81.9 percent.

Table 11

WAGE EARNERS: 1914.  
[The month of maximum employment for each industry is indicated by boldface figures and that of minimum employment by *italic* figures.]

INDUSTRY AND CITY.	Average number employed during year.	Number employed on 15th day of the month or nearest representative day.												Per cent minimum of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
All industries.....	32,704	33,288	33,273	34,155	<b>34,104</b>	34,125	33,254	31,792	<i>31,413</i>	32,208	31,615	31,571	31,700	91.3
Agricultural implements.....	311	335	335	331	334	317	321	258	273	284	310	320	333	70.8
Bread and other bakery products.....	357	330	355	330	331	363	371	376	378	374	359	357	355	88.6
Butter, cheese, and condensed milk.....	471	407	381	404	494	543	570	517	528	495	492	406	395	66.8
Cars and general shop construction and repairs by steam-railroad companies.....	1,345	1,302	1,385	1,411	1,371	1,355	1,368	1,200	1,307	1,253	1,281	1,372	1,376	88.8
Clothing, men's, including shirts.....	988	1,086	1,102	1,064	1,025	1,007	981	981	946	830	731	1,039	1,052	66.3
Clothing, women's.....	387	438	436	447	448	430	410	328	285	357	353	359	344	63.6
Confectionery.....	151	141	140	150	153	136	132	137	145	154	172	168	169	76.7
Cooperage and wooden goods, not elsewhere specified.....	260	318	310	325	291	313	307	284	256	170	180	170	160	49.2
Flour-mill and gristmill products.....	170	183	181	183	179	176	174	174	175	176	181	183	183	95.1
Foundry and machine-shop products.....	1,873	2,012	2,014	2,023	2,039	1,944	1,953	1,806	1,747	1,745	1,671	1,687	1,745	82.0
Furniture.....	1,035	1,106	1,115	1,123	1,065	1,033	1,000	1,000	954	1,009	1,026	1,034	945	84.1
Hosiery and knit goods.....	963	1,036	1,051	1,055	1,080	1,080	1,027	894	795	894	812	818	811	72.9
Lumber and timber products.....	4,108	4,641	4,588	4,502	4,670	4,713	4,207	3,604	3,400	3,471	3,719	3,777	4,024	73.6
Marble and stone work.....	9,018	8,944	8,882	8,980	9,161	9,248	9,230	9,220	9,290	9,114	9,048	8,090	8,397	90.3
Paper and wood pulp.....	1,264	1,220	1,185	1,212	1,293	1,300	1,244	1,235	950	1,429	1,422	1,343	1,365	66.5
Printing and publishing.....	651	647	657	660	661	667	650	662	647	636	644	638	634	95.1
Toys and games.....	160	150	164	160	151	155	155	146	155	177	188	170	141	71.8
Wood, turned and carved.....	361	414	417	384	307	354	330	324	330	340	352	349	350	77.7
Woolen and worsted goods.....	2,226	1,487	1,843	2,389	2,400	2,356	2,121	1,956	1,874	2,469	2,123	2,365	2,929	62.9
Total for cities.....	6,269	6,236	6,322	6,413	6,376	6,376	6,343	6,190	6,105	6,293	6,317	6,246	6,001	93.6
BARRRE.....	2,360	2,243	<i>2,243</i>	2,379	2,407	2,379	2,379	2,389	2,401	2,425	2,414	2,369	2,350	92.5
BURLINGTON.....	2,132	2,121	2,100	2,145	2,121	2,145	2,145	2,087	2,025	2,106	2,172	2,188	2,086	92.6
RUTLAND.....	1,771	1,872	1,910	1,889	1,846	1,848	1,818	1,714	1,670	1,702	1,731	1,680	1,565	81.9

**Prevailing hours of labor.**—In Table 12 the wage earners in the state and in a number of selected industries have been classified according to the number of hours of labor per week prevailing in the establishments in which they were employed in 1914 and 1909. The number employed in each establishment is classified as a total even though a few employees worked a greater or less number of hours.

The figures in this table, for the state as a whole and for most of the individual industries, emphasize the tendency toward a shortening of the working day of wage earners. In 1909, 12,508, or more than one-third of the total average number of wage earners for all industries combined, were employed in establishments where the prevailing hours of labor were 60 or more per week, while but 5,632, or only about one-sixth, were so employed in 1914. On the other hand, for all industries combined, the number of wage earners whose working hours were less than 60 hours per week increased from 21,280 in 1909 to 27,072 in 1914, forming 63 per cent and 82.8 per cent, respectively, of the total number in the state. For the state as a whole there was a marked increase during

the five-year period in the proportion of wage earners in each of the three classes from 48 and under to 54 hours per week.

Among the separate industries, marble and stone work shows the most pronounced decrease in hours of labor. In 1909, 46.3 per cent of the wage earners in this industry were employed in establishments where the hours of labor were 54 or fewer per week, but in 1914 the proportion thus employed had increased to 91.7 per cent.

In the foundry and machine-shop industry in 1909 there were no establishments reporting their prevailing hours of labor as fewer than 54 per week, but in 1914, 54.7 per cent of the wage earners in this industry were employed in establishments where such hours prevailed. Each of the two textile industries, hosiery and knit goods and woolen and worsted goods, show decreased hours of employment.

Of the combined total average number of wage earners, 6,269 for the three cities in 1914, 5,635, or practically nine-tenths, were in establishments where the prevailing hours were fewer than 60 per week, while only 49 were in establishments in which the

hours were more than 60 per week. In Barre, where marble and stone work is the predominant industry, 2,260, or 95.5 per cent, of its wage earners were reported in the class of 48 hours and under.

Table 12

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.								
		Total.	In establishments where the prevailing hours of labor per week were—							
			48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....	1914	32,704	5,579	4,727	6,452	10,314	5,077	345	182	28
	1909	33,788	4,808	1,080	4,000	11,302	11,879	406	98	65
Agricultural implements.....	1914	311			52	219	40			
	1909	360			100	199	61			
Bread and other bakery products.....	1914	357	44		120	31	127	18	17	
	1909	242	12		45	4	154	3	19	5
Butter, cheese, and condensed milk.....	1914	471	10	7	42	37	205	160	3	7
	1909	519	31	14	28	29	134	250	17	16
Cars and general shop construction and repairs by steam-railroad companies.	1914	1,345		261	341	743				
	1909	992		170		804	10	8		
Clothing, men's, including shirts.....	1914	988	174	38	520	250				
	1909	1,281	278		8	948	52			
Clothing, women's.....	1914	387			113	254	20			
	1909	333				277	56			
Confectionery.....	1914	151			36	51	64			
	1909	145	1		3	48	93			
Cooperage and wooden goods, not elsewhere specified.....	1914	200	30	20	17	54	139			
	1909	635		23		54	558			
Flour-mill and gristmill products.....	1914	179			5	32	142			
	1909	156	12	1	6	20	107	8	2	
Foundry and machine-shop products.....	1914	1,873	319	706	389	389	70			
	1909	1,860			881	719	260			
Furniture.....	1914	1,035			43	689	323			
	1909	1,119			127	428	564			
Hosiery and knit goods.....	1914	963				702	261			
	1909	946					946			
Lumber and timber products.....	1914	4,108	32	16	888	1,137	2,034		1	
	1909	4,790	35	5	285	1,024	3,384	57		
Marble and stone work.....	1914	9,018	4,379	2,904	925	577	173			
	1909	10,411	3,973	213	638	5,246	341			
Paper and wood pulp.....	1914	1,264	211	626	123	136	40	99	29	
	1909	1,030	268	415		35	203	61	58	
Printing and publishing.....	1914	651	173	31	397	31	19			
	1909	606	181	61	317	61	46			
Toys and games.....	1914	160				160				
	1909	103				31	72			
Wood, turned and carved.....	1914	361			5	113	236		7	
	1909	390				143	247			
Woolen and worsted goods.....	1914	2,226			122	1,823	281			
	1909	2,294		39		26	2,229			
All other industries.....	1914	6,596	207	58	2,308	2,006	903	68	125	21
	1909	6,516	107	139	1,567	1,206	2,362	89	2	44
Total for cities.....	1914	6,260	2,446	101	1,846	1,242	585	20	9	20
BARRE.....	1914	2,366	2,260	39	66		1			
BURLINGTON.....	1914	2,132	131	62	467	1,008	444	20		
RUTLAND.....	1914	1,771	55		1,313	234	140		9	20

Location of establishments.—Table 13 shows, for 1914, 1909, and 1899, the extent to which the manufactures in Vermont are centralized in the three cities of more than 10,000 inhabitants.

A comparison of the totals for the three cities combined for 1914 with those for 1909 shows a decrease in number of establishments and average number of wage earners, but an increase in value of products and value added by manufacture, a condition similar to that which prevailed in the districts outside the three cities. Comparisons with 1899 for the cities or

for the districts outside can not be made because the population of Barre at that date was less than 10,000, and the statistics for that city, therefore, were included with those for the outside districts.

The table shows that for 1914 the three cities, which contained 13.1 per cent of the estimated population of the state, reported 18.5 per cent of the total value of products and 19.2 per cent of the total average number of wage earners. The corresponding proportions for 1909 were slightly less, with the exception of that for value of products, which was 19.5 per cent.

Table 13	Census year.	Aggregate.	CITIES HAVING A POPULATION OF 10,000 OR OVER.				DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 OR OVER.	
			Total.		10,000 to 25,000.			
			Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.
Number of places.....	1914		3		3			
	1910		3		3			
	1900		2		2			
Population <sup>1</sup> .....	1914	361,205	47,370	13.1	47,370	13.1	313,835	86.0
	1910	355,956	44,748	12.6	44,748	12.6	311,208	87.4
	1900	343,641	30,130	8.8	30,130	8.8	313,502	91.2
Number of establishments.....	1914	1,772	262	14.8	262	14.8	1,510	85.2
	1909	1,958	284	14.5	284	14.5	1,674	85.5
	1899	1,938	130	7.2	130	7.2	1,799	92.8
Average number of wage earners.....	1914	32,704	6,209	19.2	6,209	19.2	26,495	80.8
	1909	33,788	6,347	18.8	6,347	18.8	27,441	81.8
	1899	28,170	3,728	13.2	3,728	13.2	24,451	86.2
Value of products.....	1914	\$70,090,974	\$14,205,265	18.5	\$14,205,265	18.5	\$52,785,709	81.5
	1909	68,309,824	13,332,105	19.5	13,332,105	19.5	54,077,629	80.5
	1899	51,515,228	8,025,240	15.6	8,025,240	15.6	43,489,988	84.4
Value added by manufacture.....	1914	34,285,254	7,150,353	20.9	7,150,353	20.9	27,134,901	79.1
	1909	33,487,090	6,880,526	20.6	6,880,526	20.6	26,606,570	79.4
	1899	25,130,416	3,895,818	15.5	3,895,818	15.5	21,234,598	84.5

<sup>1</sup> Census estimate of population for 1914.

Table 14 shows the relative importance in manufactures of each of the three cities having more than 10,000 inhabitants, as measured by average number of wage earners and by the value of products in 1914, 1909, and 1904.

Table 14 CITY.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1914	1909	1904	1914	1909	1904
Burlington.....	2,132	2,371	2,300	\$0,036,056	\$0,800,490	\$0,355,754
Barre.....	2,308	2,340	2,108	4,201,600	3,852,177	3,373,040
Rutland.....	1,771	1,636	1,803	3,276,709	2,670,528	2,522,850

The manufacturing industries of Barre and Rutland show an increase in value of products for each of the five-year periods 1904-1909 and 1909-1914, but for the city of Burlington there was a decrease during the five-year period 1909-1914.

For the five-year period 1904-1909 Rutland shows a decrease in average number of wage earners notwithstanding an increase in value of products, and for Burlington and Barre the increases in number of wage earners are not proportionate to the increases in value of products. This condition may be due to the increase in the prices of commodities during recent years referred to in the "Explanation of terms."

The principal industries in Burlington are lumber, planing-mill products, cotton goods, and patent medicines and compounds.

In Barre the marble and stone work industry, the output of which forms nine-tenths of the total value of products of the city, dwarfs the remainder of its manufactures.

In Rutland the principal industries are scales and balances, steam-railroad repair shops, foundry and machine-shop products, and marble and stone work.

**Character of ownership.**—Table 15 presents statistics in respect to character of ownership, or legal organization, of manufacturing enterprises. For all industries combined, comparative figures are given for 1914, 1909, and 1904, while for the selected industries, figures for 1914 and 1909 only are given. In order to avoid disclosing the operations of individual establishments, it is necessary to omit several important industries from this table.

For all industries combined, during the decade, this table shows an increase in the number of establishments under corporate ownership and decreases for the other two classes. Although, of the three classes of ownership, corporations show the smallest proportion of the establishments, in value of products and average number of wage earners they largely predominate. For 1914, with but 22 per cent of the total number of establishments in the state, they reported 68.7 per cent of the total value of products and 71.4 per cent of the total average number of wage earners. In 1909 and 1904 the corresponding proportions are only slightly less. The proportions of the total average number of wage earners and value of products reported by corporations have been greater at each successive census.

Individual ownership for all industries combined shows a greater number of establishments in 1914 and 1909 than for "corporations" and "all others" together, although slightly less in 1904. Their proportions of value of products and average number of wage earners, however, was less than that for "all others" in 1909 and 1904, although slightly greater in 1914. In 1914, with the exception of flour-mill and gristmill products, the largest proportions of the total products for the nine industries for which separate statistics are given are shown for corporate owner-



ship. This condition prevails also in each of the three cities, although it is much less pronounced in Barre than in Burlington and Rutland. In Barre, however,

88 of the 110 establishments in the city were engaged in marble and stone work, in which industry there were few corporations.

INDUSTRY AND CITY.		Cen- sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
						Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
			Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.					Indi- vid- uals.	Cor- pora- tions.	All oth- ers.				Indi- vid- uals.	Corpora- tions.	All others.	Indi- vid- uals.
All industries.....	1914 1909 1904	931 1,029 833	390 372 309	451 557 557	32,704 33,788 33,100	5,043 5,060 5,882	23,335 22,857 20,544	4,326 5,865 6,680	15.4 15.0 17.8	71.4 67.6 62.1	13.2 17.4 20.2	\$76,900,974 68,309,824 63,083,611	\$12,202,958 12,175,721 12,027,326	\$52,854,963 42,641,046 36,373,592	\$11,933,053 13,493,057 14,682,693	15.8 17.8 19.1	68.7 62.4 57.7	15.5 19.8 23.3					
Butter, cheese, and condensed milk.	1914 1909	39 50	44 22	90 114	471 519	66 107	238 245	167 167	14.0 20.6	50.5 47.2	35.5 32.2	8,695,915 8,112,239	1,399,143 1,850,284	3,895,209 2,963,937	3,401,563 3,308,018	16.1 22.8	44.8 36.4	39.1 40.8					
Flour-mill and gristmill products.	1914 1909	86 92	7 8	32 33	179 150	105 91	20 20	54 39	58.7 58.3	11.2 16.7	30.2 25.0	4,142,854 4,133,337	2,034,174 1,946,363	680,663 848,425	1,428,017 1,338,559	49.1 47.1	16.4 20.5	34.5 32.4					
Foundry and machine-shop products.	1914 1909	12 20	23 25	5 11	1,873 1,860	202 184	1,635 1,535	36 141	10.8 9.9	87.3 82.5	1.9 7.6	3,428,162 3,764,801	277,809 350,860	3,080,615 3,162,037	69,738 241,894	8.1 9.3	89.9 84.2	2.0 6.4					
Furniture.....	1914 1909	4 2	10 14	1 3	1,035 1,119	..... .....	1,010 1,000	119 129	..... .....	98.2 97.4	1.8 2.6	1,042,789 1,017,759	..... .....	1,012,657 1,581,394	130,132 136,365	..... .....	98.2 97.8	1.8 2.2					
Hosiery and knit goods..	1914 1909	1 1	4 5	2 2	963 946	..... .....	699 723	1264 1223	..... .....	72.6 70.4	27.4 23.6	2,164,897 1,745,670	..... .....	1,562,030 1,165,820	1,602,867 1,479,850	..... .....	72.2 72.5	27.8 27.5					
Lumber and timber products.	1914 1909	351 390	53 61	112 142	4,108 4,790	1,703 1,962	1,423 1,420	982 1,402	41.5 41.0	34.6 29.8	23.9 20.3	8,768,453 8,598,084	3,032,113 3,164,198	3,972,515 3,273,245	1,763,825 2,100,641	34.6 36.8	45.3 38.1	20.1 25.1					
Marble and stone work...	1914 1909	118 136	52 54	106 152	9,018 10,411	1,163 1,030	5,604 6,388	2,161 2,993	12.9 9.9	63.1 61.4	24.0 28.7	12,665,417 12,395,379	1,706,912 1,520,143	7,849,191 7,178,038	3,049,314 3,067,198	13.5 12.3	62.3 57.9	24.2 29.8					
Paper and wood pulp....	1914 1909	..... 1	16 10	7 8	1,264 1,030	..... .....	1,156 878	108 1152	..... .....	91.5 85.2	8.5 14.8	4,776,387 3,901,634	..... .....	4,372,432 3,342,490	403,955 1,559,144	..... .....	91.5 85.7	8.5 14.3					
Woolen and worsted goods.	1914 1909	4 4	13 13	..... .....	2,226 2,204	243 148	1,983 2,146	..... .....	10.9 6.5	89.1 93.5	..... .....	4,634,593 4,496,903	390,179 253,503	4,244,414 4,243,400	..... .....	8.4 5.6	91.6 94.4	..... .....					
Total for cities.....	1914	99	81	82	6,269	739	4,200	1,330	11.8	67.0	21.2	14,205,265	1,765,144	9,841,444	2,568,677	12.4	69.3	18.3					
BARRE.....	1914	44	18	48	2,360	409	879	1,018	19.8	37.2	43.0	4,291,600	792,323	1,779,392	1,719,885	18.5	41.5	40.1					
BURLINGTON.....	1914	28	41	18	2,132	195	1,736	201	9.1	81.4	9.4	6,636,956	751,176	5,516,533	369,248	11.3	83.1	5.6					
RUTLAND.....	1914	27	22	10	1,771	75	1,685	111	4.2	89.5	6.3	3,276,709	221,646	2,546,519	609,544	6.8	77.7	15.6					

<sup>1</sup> Includes the group "individuals," to avoid disclosure of individual operations.

Size of establishments.—Table 16 shows, for all industries combined, for 1914, 1909, and 1904, the number of establishments, grouped according to the

value of products, and, for each group, the average number of wage earners, value of products, value added by manufacture, and per cent distribution.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904
All classes.....	1,772	1,058	1,000	32,704	33,788	33,106	\$76,900,974	\$68,309,824	\$63,083,611	\$34,285,254	\$35,487,096	\$30,653,759
Less than \$5,000.....	527	600	426	730	1,100	752	1,287,368	1,693,585	1,190,017	827,200	1,089,581	743,470
\$5,000 to \$20,000.....	620	644	672	3,311	3,844	4,246	6,571,006	6,976,450	7,031,382	3,529,041	3,729,572	3,850,847
\$20,000 to \$100,000.....	472	493	483	7,924	9,491	10,011	20,238,946	20,340,258	19,927,286	8,741,373	9,653,436	9,145,201
\$100,000 to \$1,000,000.....	146	127	112	15,045	14,466	13,174	37,623,534	32,104,250	26,459,867	16,072,472	14,813,124	11,269,943
\$1,000,000 and over.....	7	4	6	5,604	4,887	4,923	10,970,120	7,195,231	8,475,059	5,115,163	4,201,383	5,644,298
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	29.7	35.2	25.1	2.2	3.3	2.3	1.7	2.5	1.9	2.4	3.3	2.4
\$5,000 to \$20,000.....	35.0	32.9	39.6	10.1	11.4	12.8	8.5	10.2	11.1	10.3	11.1	12.6
\$20,000 to \$100,000.....	26.6	25.2	28.4	24.2	28.1	30.2	26.3	29.8	31.6	25.5	28.8	29.8
\$100,000 to \$1,000,000.....	8.2	6.5	6.6	46.0	42.8	39.8	49.3	47.0	41.9	46.9	44.2	36.8
\$1,000,000 and over.....	0.4	0.2	0.4	17.4	14.6	14.9	14.2	10.5	13.4	14.9	12.5	18.4

For 1914, 153 establishments, or 8.6 per cent of the total number in the state, each reported products exceeding \$100,000 in value, as compared with 131, or 6.7 per cent of the total, in 1909, and 118, or 7 per cent, in 1904. For 1914 these establishments reported an average of 20,739 wage earners, or 63.4 per cent of the total for the state, 63.5 per cent of the total

value of products, and 61.8 per cent of the total value added by manufacture. In the same year the small establishments, those having products of less than \$100,000 in value, represented 91.3 per cent of the total number of establishments but reported only 36.5 per cent of the total value of products. For the establishments having products valued at \$100,000 and

over, the proportion of the total products shows an increase at each successive census, from 55.3 per cent in 1904 to 57.5 per cent in 1909 and 63.5 per cent in 1914.

Table 17 shows, for several of the more important industries, a similar grouping of establishments, according to value of products, for 1914 and 1909.

INDUSTRY AND VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.				AVERAGE NUMBER OF WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
			Per cent distribution.				Per cent distribution.				Per cent distribution.				Per cent distribution.	
	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909
BUTTER, CHEESE, AND CONDENSED MILK.....	173	180	100.0	100.0	471	519	100.0	100.0	\$8,065,915	\$8,112,239	100.0	100.0	\$710,625	\$1,050,425	100.0	100.0
Less than \$5,000.....	0	15	3.5	8.1	3	0	0.6	1.7	23,150	50,363	0.3	0.6	1,650	9,030	0.2	0.9
\$5,000 to \$20,000.....	41	56	23.7	30.1	33	40	7.0	9.4	400,006	688,074	5.0	8.5	47,650	73,438	6.6	7.0
\$20,000 to \$100,000.....	109	103	63.0	55.4	220	202	48.0	38.0	4,880,427	4,140,908	59.2	51.1	416,010	416,307	57.8	39.4
\$100,000 to \$1,000,000.....	17	12	9.8	6.5	209	259	44.4	49.0	3,293,323	3,225,031	37.0	39.8	251,273	557,650	35.3	52.8
FLOUR-MILL AND GRISTMILL PRODUCTS.....	125	133	100.0	100.0	179	156	100.0	100.0	4,142,854	4,133,337	100.0	100.0	483,801	605,015	100.0	100.0
Less than \$5,000.....	5	6	4.0	4.5	3	4	1.7	2.6	14,132	34,734	0.3	0.8	2,973	7,130	0.6	1.2
\$5,000 to \$20,000.....	64	74	51.2	55.6	50	50	31.3	32.1	776,566	631,658	18.7	22.5	120,636	147,006	26.8	24.4
\$20,000 to \$100,000.....	61	48	40.8	39.1	80	80	48.0	51.3	1,908,506	1,840,723	48.2	44.8	292,833	292,826	60.5	43.4
\$100,000 to \$1,000,000.....	5	5	4.0	3.8	34	22	19.0	14.1	1,353,590	1,317,322	32.7	31.0	58,592	187,363	12.1	31.0
FOUNDRY AND MACHINE-SHOP PRODUCTS.....	40	56	100.0	100.0	1,873	1,860	100.0	100.0	3,428,102	3,754,801	100.0	100.0	2,366,340	2,419,600	100.0	100.0
Less than \$5,000.....	8	11	20.0	19.0	22	25	1.2	1.3	20,863	27,302	0.8	0.7	20,863	15,919	0.9	0.7
\$5,000 to \$20,000.....	12	14	30.0	25.0	114	88	6.1	4.5	109,440	156,775	4.9	4.1	110,320	91,054	4.7	3.8
\$20,000 to \$100,000.....	12	21	30.0	37.5	317	488	16.0	26.2	655,081	874,502	10.2	23.3	357,087	577,742	15.1	23.0
\$100,000 to \$1,000,000.....	8	10	20.0	17.9	1,420	1,294	76.8	68.0	2,070,109	2,007,132	78.1	71.8	1,878,004	1,734,075	70.4	71.7
LUMBER AND TIMBER PRODUCTS.....	516	593	100.0	100.0	4,108	4,790	100.0	100.0	8,768,453	8,508,084	100.0	100.0	4,787,759	4,467,342	100.0	100.0
Less than \$5,000.....	221	304	42.8	51.3	350	578	8.5	12.1	537,071	740,081	6.1	8.7	356,970	502,940	7.5	11.3
\$5,000 to \$20,000.....	220	214	42.6	30.1	1,343	1,024	32.7	33.0	2,200,813	2,227,004	25.1	25.9	1,472,144	1,463,365	28.7	32.8
\$20,000 to \$100,000.....	63	66	12.2	11.1	1,514	1,052	36.0	34.5	2,457,504	2,063,711	28.0	31.0	1,559,213	1,063,005	32.6	37.0
\$100,000 to \$1,000,000.....	12	9	2.3	1.5	901	936	21.9	19.5	3,573,065	2,658,108	40.7	34.4	1,406,432	807,126	31.3	18.1
MARBLE AND STONE WORK.....	270	342	100.0	100.0	9,018	10,411	100.0	100.0	12,005,417	12,395,379	100.0	100.0	8,921,913	9,877,531	100.0	100.0
Less than \$5,000.....	58	97	21.0	28.4	90	144	1.0	1.4	167,090	252,574	1.3	2.0	108,420	182,150	1.2	1.8
\$5,000 to \$20,000.....	97	111	35.1	32.5	775	986	8.6	9.5	1,113,332	1,200,030	8.8	9.8	788,350	908,126	8.8	9.1
\$20,000 to \$100,000.....	105	115	38.0	33.0	2,961	3,448	32.8	33.1	4,387,060	4,434,076	34.8	35.8	2,905,325	3,215,531	33.2	32.6
\$100,000 and over.....	110	119	5.8	5.0	5,192	5,833	57.6	50.0	6,940,439	6,498,199	55.1	52.4	5,001,809	5,576,721	50.7	50.5

<sup>1</sup> Includes the group "\$1,000,000 and over."

For 1914 as compared with 1909, as in the totals for all industries combined, this table shows that for each of the five industries there was a general decrease for the establishments having products under \$100,000 in value. During the five-year period, for the establishments having products valued at \$100,000 and over, two of the industries, flour-mill and gristmill products, and foundry and machine-shop products

show an increase in the average number of wage earners and all except foundry and machine-shop products an increase in value of products.

Table 18 shows for all industries combined in each of the three cities having a population of 10,000 and over the number of establishments grouped according to value of products, of wage earners, value of products, and value added by manufacture, for 1914.

Table 18

CITY AND VALUE OF PRODUCT.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
		Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.
BARRE.....	110	2,366	100.0	\$4,291,600	100.0	\$2,955,148	100.0
Less than \$5,000.....	20	18	0.8	50,626	1.2	37,530	1.3
\$5,000 to \$20,000.....	27	182	7.7	312,801	7.3	219,196	7.4
\$20,000 to \$100,000.....	56	1,320	55.8	2,310,708	53.8	1,500,020	50.9
\$100,000 to \$1,000,000.....	7	846	36.8	1,617,465	37.7	1,197,502	40.5
BURLINGTON.....	87	2,132	100.0	6,636,956	100.0	2,528,352	100.0
Less than \$5,000.....	20	25	1.2	49,041	0.7	33,928	1.3
\$5,000 to \$20,000.....	24	128	6.0	264,494	4.0	144,596	5.7
\$20,000 to \$100,000.....	26	507	23.8	1,183,723	17.8	518,271	20.5
\$100,000 to \$1,000,000.....	17	1,472	69.0	5,130,098	77.4	1,831,557	72.4
RUTLAND.....	65	1,771	100.0	3,270,700	100.0	1,066,853	100.0
Less than \$5,000.....	20	21	1.2	47,782	1.5	23,320	1.7
\$5,000 to \$20,000.....	17	73	4.1	176,826	5.4	87,297	5.2
\$20,000 to \$100,000.....	17	326	18.4	735,034	22.4	407,903	24.5
\$100,000 to \$1,000,000.....	11	1,351	76.3	2,317,067	70.7	1,143,324	68.6

In the totals for Burlington and Rutland the same general condition is found as prevail for all industries

combined in the state, namely, a preponderance as to value of products for establishments in the group of

\$100,000 and over, representing 77.4 per cent and 70.7 per cent of the totals for the two cities, respectively. For Barre, however, the greatest value of products, 53.8 per cent, appears for the group \$20,000 to \$100,000. Each of the three cities shows a considerable proportion of the total number of establishments as having products valued at less than \$20,000, but their combined value of products was relatively small. Of the total number of such establishments for each of these cities, those in Barre represented 42.7

per cent, in Burlington 50.6 per cent, and in Rutland 56.9 per cent, whereas the values of their products formed only 8.5 per cent, 4.7 per cent, and 6.9 per cent, respectively.

Table 19 shows, for 1914, for all industries in the state combined, for 19 of the more important industries individually, and for each of the three cities, the number of establishments and the number of wage earners grouped according to the average number of wage earners employed.

Table 19

INDUSTRY AND CITY.	TOTAL.		ESTABLISHMENTS EMPLOYING—							
			No wage earners.		1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.	
	Estab-lish-ments.	Wage earners (average number).	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.
All industries.....	1,772	32,704	138	971	2,131	372	4,181	171	5,400	
Agricultural implements.....	9	311								153
Bread and other bakery products.....	85	357	8	69	136	15	125	4	96	
Butter, cheese, and condensed milk.....	173	471	12	150	273	8	80	2	53	
Cars and general shop construction and repairs by steam-railroad companies.....	5	1,345				1	9	1	23	
Clothing, men's, including shirts.....	10	988	1			1	15	2	68	
Clothing, women's.....	7	387		2	5		10			
Confectionery.....	4	151	1		7			1	36	
Cooperage and wooden goods, not elsewhere specified.....	15	260	1	5		5	63	2	52	
Flour-mill and gristmill products.....	125	179	17	106	153	2	26			
Foundry and machine-shop products.....	40	1,873		10	28	15	164	5	139	
Furniture.....	15	1,035	1	3	12	1	7	5	198	
Hosiery and knit goods.....	7	963		1	3			5	27	
Lumber and timber products.....	516	4,108	19	334	792	119	1,352	34	1,059	
Marble and stone work.....	276	9,018	19	81	212	86	1,061	70	2,209	
Paper and wood pulp.....	23	1,264				9	128	5	122	
Printing and publishing.....	111	651	23	54	146	25	207	8	238	
Toys and games.....	4	160				2	21			
Wood, turned and carved.....	33	361		19	56	11	131	2	79	
Woolen and worsted goods.....	17	2,226						3	68	
All other industries.....	297	6,596	36	147	308	67	698	23	775	
Total for cities.....	262	6,269	22	93	243	71	850	50	1,563	
BARRE.....	110	2,366	10	25	74	37	479	31	948	
BURLINGTON.....	87	2,132	8	33	87	23	244	11	405	
RUTLAND.....	65	1,771	4	35	82	11	127	8	210	

Table 19—Continued.

INDUSTRY AND CITY.	ESTABLISHMENTS EMPLOYING—									
	51 to 100 wage earners.		101 to 250 wage earners.		251 to 500 wage earners.		501 to 1,000 wage earners.		Over 1,000 wage earners.	
	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.
All industries.....	58	4,140	41	6,090	14	4,604	6	3,819	1	2,339
Agricultural implements.....			1	110						
Bread and other bakery products.....										
Butter, cheese, and condensed milk.....	1	65								
Cars and general shop construction and repairs by steam-railroad companies.....	2	148	4	757	2	602	1	706		
Clothing, men's, including shirts.....										
Clothing, women's.....	2	150	2	216						
Confectionery.....	2	115								
Cooperage and wooden goods, not elsewhere specified.....	2	138								
Flour-mill and gristmill products.....										
Foundry and machine-shop products.....	4	204	4	504	2	774				
Furniture.....			4	563	1	255				
Hosiery and knit goods.....	2	141	2	305	1	487				
Lumber and timber products.....	7	499	3	406						
Marble and stone work.....	10	801	6	851	2	637	1	878	1	2,339
Paper and wood pulp.....	7	473	1	173	1	368				
Printing and publishing.....	1	60								
Toys and games.....	2	139								
Wood turned and carved.....	1	95								
Woolen and worsted goods.....	8	597	3	354	2	554	1	653		
All other industries.....	7	455	11	1,851	3	927	3	1,582		
Total for cities.....	15	1,113	7	873	3	1,103	1	524		
BARRE.....	5	388	1	106	1	371				
BURLINGTON.....	8	679	3	426	1	391				
RUTLAND.....	2	146	3	341	1	341	1	524		

Of the total number of establishments for all industries in the state combined, 138, or 7.8 per cent, employed no wage earners. The numbers in the several remaining groups are as follows: Employing from 1 to 5 wage earners, 971, or 54.8 per cent; from 6 to 50, 543, or 30.6 per cent; from 51 to 250, 99, or 5.6 per cent; and more than 250, 21, or 1.2 per cent. The percentages for average number of wage earners employed, however, differ greatly from those just given. The group of establishments employing from 1 to 5 wage earners, which represented 54.8 per cent of the total number of establishments, reported 2,131 wage earners, or but 6.5 per cent of the total. On the other hand, the group of establishments having more than 250 employees, while comprising but 1.2 per cent of the total number of establishments, employed 10,762, or 32.9 per cent, of the wage earners. The groups of establishments having more than 50 wage earners represented only 6.8 per cent of the total number of establishments in the state, but gave employment to 20,992

wage earners, or 64.2 per cent of the total. As an indication of the nature of the industries embracing the smaller establishments, it will be noticed that for bread and bakery products, dairy products, and flour-mill and gristmill products the majority of the establishments employ from 1 to 5 wage earners. A comparison of the industries shown in this table brings out the fact that, in the steam-railroad repair shops, in the foundries and machine shops, in the manufacture of men's clothing, furniture, hosiery and knit goods, and woolen and worsted goods, and in the marble and stone work industry, the majority of the wage earners were in establishments giving employment to more than 100 wage earners.

In Barre 20.2 per of the wage earners were in establishments employing more than 100 wage earners; in Burlington, 38.3 per cent; and in Rutland, 68.1 per cent.

Table 20 gives, for 1914, percentages based on the figures in the preceding table, together with similar percentages for 1909.

INDUSTRY.	Census year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.								INDUSTRY.	Census year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000			1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
All Industries.....	1914 1909	6.5 6.9	12.8 3.8	16.5 18.9	12.7 11.7	18.6 17.6	14.1 17.5	11.7 2.3	7.2 11.2	Furniture.....	1914 1909	1.2 0.3	0.7 6.2	10.1 10.0	54.4 20.1	24.6 63.4	.....	.....	.....
Agricultural implements.....	1914 1909	.....	15.4 14.4	49.2 26.4	.....	35.4 42.5	.....	.....	.....	Hosiery and knit goods.....	1914 1909	0.3 0.5	.....	2.8 8.4	14.6 22.5	31.7 16.0	50.6 62.0	.....	.....
Bread and other bakery products.	1914 1909	38.1 50.1	35.0 31.4	26.9 9.5	.....	.....	.....	.....	.....	Lumber and timber products.	1914 1909	10.3 10.0	32.9 34.4	25.8 20.1	12.1 5.7	9.9 14.7	.....	.....	.....
Butter, cheese, and condensed milk.	1914 1909	58.0 47.4	17.0 10.0	11.3 28.9	13.8 13.7	.....	.....	.....	.....	Marble and stone work.....	1914 1909	2.4 2.0	12.1 12.8	24.5 22.3	8.0 9.0	0.4 13.5	7.1 15.0	9.7 21.0	25.9
Cars and general shop construction and repairs by steam-railroad companies.	1914 1909	.....	0.7 1.8	2.1 2.4	.....	44.8 10.3	52.5 78.0	.....	.....	Paper and wood pulp.....	1914 1909	.....	10.1 0.5	9.7 11.8	37.4 28.5	13.7 24.3	20.1 30.8	.....	.....
Clothing, men's, including shirts.	1914 1909	.....	1.5 1.1	6.9 5.6	15.0 8.2	78.6 40.8	.....	.....	.....	Printing and publishing.....	1914 1909	22.4 23.0	31.8 38.0	36.6 37.8	0.2	.....	.....	.....	.....
Clothing, women's.....	1914 1909	1.3 0.0	4.1 .....	.....	38.8 48.6	55.8 33.0	.....	.....	.....	Toys and games.....	1914 1909	.....	13.1 2.9	.....	86.9 67.0	.....	.....	.....	.....
Confectionery.....	1914 1909	.....	7.6 8.3	23.8 84.1	70.2	.....	.....	.....	.....	Wood, turned and carved....	1914 1909	15.5 12.8	36.3 33.3	21.9 31.8	26.3 22.1	.....	.....	.....	.....
Cooperage and wooden goods, not elsewhere specified.	1914 1909	2.7 2.7	24.2 18.3	20.0 18.3	53.1 8.6	.....	52.3	.....	.....	Woolen and worsted goods...	1914 1909	.....	.....	3.1 8.4	26.8 21.3	15.9 15.0	24.9 .....	29.3 65.5	.....
Flour-mill and gristmill products.	1914 1909	85.5 88.5	14.5 11.5	.....	.....	.....	.....	.....	.....	All other industries.....	1914 1909	4.7 5.5	10.6 10.8	11.7 14.0	6.9 9.4	28.1 12.9	14.1 33.0	24.0 14.4	.....
Foundry and machine-shop products.	1914 1909	1.5 2.4	8.8 7.4	7.4 18.1	14.1 18.1	26.9 38.1	41.3 15.0	.....	.....										

**Engines and power.**—Table 21 shows, for 1914, 1909, and 1904, for all industries combined, the number and total horsepower of engines or motors, classified according to their character, employed in generating power (including electric motors operated by purchased current). It also shows separately the number and horsepower of electric motors operated by current generated by the establishments reporting.

This table shows an increase in primary power amounting to 14,492 horsepower, or 9.1 per cent, from 1909 to 1914, due to the increase in rented power. The use of rented power, almost wholly electric, has greatly increased since 1904, when 5,871 horsepower

of this character, representing 4.2 per cent of the total primary power, was reported. In 1909 the amount of such power had increased to 13,556 horsepower, or 8.5 per cent of the total, and in 1914, to 28,376 horsepower, or 16.3 per cent of the total. The increase in the use of electric motors run by current generated within the same establishments has kept pace with that in rented power.

The increase in rented power no doubt has some influence on owned power, the total for which decreased from 145,889 horsepower in 1909 to 145,561 in 1914. This decrease is due to the falling off in steam power, there having been a small increase during this period

in the power developed by water wheels, turbines, and motors, and internal-combustion engines. For steam and for water power there were decided increases in

the average capacity of the engines and water wheels and motors, but the capacity of the internal-combustion engines remained practically the same.

Table 21

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904
Primary power, total.....	3,960	3,256	2,217	173,937	159,445	140,616	100.0	100.0	100.0
Owned.....	1,870	2,416	2,217	145,561	145,889	134,745	83.7	91.5	95.8
Steam engines and turbines <sup>1</sup> .....	864	1,167	996	62,860	64,667	57,025	36.1	40.6	40.5
Internal-combustion engines.....	160	161	101	2,301	2,160	1,483	1.3	1.4	1.1
Water wheels, turbines, and motors.....	846	1,088	1,120	80,400	79,062	76,237	46.2	49.6	54.2
Rented.....	2,090	840	( <sup>2</sup> )	28,376	13,556	5,871	16.3	8.5	4.2
Electric.....	2,090	840	( <sup>2</sup> )	27,477	12,917	4,550	15.8	8.1	3.2
Other.....				899	639	1,321	0.5	0.4	0.9
Electric.....	3,030	1,512	110	47,161	21,233	7,238	100.0	100.0	100.0
Rented.....	2,090	840	( <sup>2</sup> )	27,477	12,917	4,550	58.3	60.8	62.9
Generated by establishments reporting.....	940	672	110	19,684	8,316	2,688	41.7	39.2	37.1

<sup>1</sup> Figures for horsepower include for 1909 and 1904 the amount reported under the head of "other" owned power.

<sup>2</sup> Not reported.

**Fuel.**—Closely related to the kind of power employed in manufactures is that of the fuel consumed in generating this power or otherwise used in the manufacturing processes.

Table 22 shows the quantity of each kind of fuel used, for which statistics were required, for all industries combined and for certain selected industries separately, for 1914.

Table 22

INDUSTRY AND CITY.	COAL.		Coke (tons, 2,000 lbs.).	Oil, including gas-oil (barrels).	Gas (1,000 cubic feet).	INDUSTRY AND CITY.	COAL.		Coke (tons, 2,000 lbs.).	Oil, including gas-oil (barrels).	Gas (1,000 cubic feet).
	An-thra-cite (tons, 2,240 lbs.).	Bitu-minous (tons, 2,000 lbs.).					An-thra-cite (tons, 2,240 lbs.).	Bitu-minous (tons, 2,000 lbs.).			
All industries.....	50,146	203,409	6,824	22,454	7,528	Marble and stone work.....	5,053	39,676	94	474	66
Agricultural implements.....	1,342	1,435		3,322		Paper and wood pulp.....	21,920	44,303			
Bread and other bakery products.....	2,365	357	288	35	1,328	Woolen and worsted goods.....	180	32,936	414		
Butter, cheese, and condensed milk.....	1,188	11,065	65	138		All other industries.....	11,514	41,738	2,675	2,688	5,087
Cars and general shop construction and repairs by steam-railroad companies....	638	13,322	261	150	14	Total for cities.....	9,782	26,187	2,887	8,965	5,095
Flour-mill and gristmill products.....	124	340		533		BARRE.....	2,235	8,053	84	1,775	869
Foundry and machine-shop products.....	2,499	5,593	2,038	554	1,033	BURLINGTON.....	4,070	11,001		6,962	2,163
Gas, illuminating and heating.....	3,135	8,329	989	14,004		RUTLAND.....	3,477	7,133	2,803	228	2,063
Hosiery and knit goods.....	22	5,158									
Lumber and timber products.....	116	2,757		647							

## SPECIAL STATISTICS.

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantities and cost of materials, the quantity and value of products, and other information for securing which no provision is made on the general schedule. Certain data of this character for four important industries in Vermont are here presented.

**Butter, cheese, and condensed milk.**—Vermont is one of the leading dairy-product states, ranking fourteenth in value of products in 1914 and tenth in 1909. Table 23 gives the quantity and value of products for the industry for 1914, 1909, and 1904.

Table 23	1914	1909	1904 <sup>1</sup>
Total value.....	\$8,095,015	\$8,112,230	\$6,416,434
Butter:			
Packed solid—			
Pounds.....	9,999,182	12,589,015	10,210,831
Value.....	\$2,991,078	\$3,673,807	\$3,400,092
Prints or rolls—			
Pounds.....	11,077,765	7,638,480	11,016,043
Value.....	\$3,451,205	\$2,348,259	\$2,435,052
Cream sold:			
Pounds.....	10,130,732	4,502,709	571,402
Value.....	\$517,729	\$600,303	\$65,522
Cheese:			
Full cream—			
Pounds.....	2,114,221	2,570,073	4,271,160
Value.....	\$337,372	\$378,057	\$416,786
Other kinds—			
Pounds.....	408,716	180,583	72,000
Value.....	\$41,581	\$17,721	\$10,800
Condensed and evaporated milk:			
Pounds.....	16,887,549	13,342,006	( <sup>2</sup> )
Value.....	\$1,200,713	\$975,063	( <sup>2</sup> )
All other butter, cheese, and condensed-milk factory products, value.....	\$155,637	\$118,330	\$70,182

<sup>1</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.

<sup>2</sup> Figures can not be shown without disclosing individual operations.

The number of establishments, as shown in Table 31, decreased at each successive census, being 220, 186, and 173 at the censuses of 1904, 1909, and 1914, respectively. This decrease is accounted for largely by the decrease in the manufacture of cheese in the state, and also, to some extent, by a tendency toward consolidation in the dairy industry as a whole.

The total value of products shows an increase of \$1,695,805, or 26.4 per cent, from 1904 to 1909, and of \$583,676, or 7.2 per cent, from 1909 to 1914. The fact should not be overlooked, however, that the total for 1904 is exclusive of the value of products for one establishment, as noted on the table.

For the decade 1904–1914 there was a decrease of 6,179,927 pounds, or 22.7 per cent, in the total quantity of butter manufactured, but an increase of \$598,739, or 10.2 per cent, in its value. The decrease in quantity was confined to butter packed solid, there having been an increase during the decade of 31,722 pounds in prints or rolls. For the five-year period 1909–1914 both the quantity and value decreased for butter packed solid but increased for prints or rolls. There was a decrease in the quantity and value of full-cream cheese, 1904 to 1909, and 1909 to 1914. The "other kinds" which include "skimmed," "part

cream," and "cottage cheese," although comparatively unimportant, increased at each succeeding census. The production of cottage cheese as a primary manufacture is not confined to the establishments shown in this table, since this kind of cheese is more frequently reported by them as a by-product.

The manufacture of condensed milk can not be shown separately for 1904 because of the liability of disclosing the operations of individual establishments, but for the five-year period 1909–1914 there was an increase of 3,544,883 pounds, or 26.6 per cent, in the quantity, and \$225,050, or 23.1 per cent, in its value.

**Paper and wood pulp.**—Table 24 shows the quantities and cost of the principal materials used and the quantities and values of the various products of the paper and pulp mills of Vermont, as reported at the censuses of 1914, 1909, and 1904. The table also gives the number and daily capacity of the paper machines used and the yearly capacity of both pulp and paper mills.

Table 24	1914	1909	1904
<b>MATERIALS.</b>			
Total cost.....	\$3,004,305	\$2,455,355	\$2,539,796
Pulp wood:			
Cords.....	65,813	( <sup>1</sup> )	75,139
Cost.....	\$677,217	\$708,018	\$562,444
Wood pulp, purchased, total:			
Tons.....	27,000	24,304	22,068
Cost.....	\$900,801	\$700,412	\$628,814
Ground, including mechanical screenings—			
Tons.....	8,010	11,556	11,426
Cost.....	\$179,751	\$253,778	\$212,210
Sulphite fiber—			
Tons.....	13,018	11,577	11,220
Cost.....	\$511,158	\$484,328	\$402,740
Other chemical fiber—			
Tons.....	5,072	1,171	322
Cost.....	\$200,940	\$52,306	\$13,861
Old or waste paper:			
Tons.....	7,874	2,370	5,148
Cost.....	\$121,834	\$52,091	\$118,287
All other materials, cost.....	\$1,304,453	\$903,331	\$1,230,101
<b>PRODUCTS.</b>			
Total value.....	\$4,776,387	\$3,001,634	\$3,831,448
News paper:			
Tons.....	31,223	10,455	34,396
Value.....	\$1,353,012	\$688,363	\$1,397,204
Wrapping paper:			
Tons.....	11,948	16,323	17,633
Value.....	\$869,131	\$860,818	\$801,100
Boards:			
Tons.....	7,244	3,685	4,590
Value.....	\$246,135	\$159,452	\$183,764
Tissue paper:			
Tons.....	2,262	3,500	3,045
Value.....	\$179,284	\$331,013	\$274,411
Ground wood pulp produced for sale or for use in establishments other than where manufactured:			
Tons.....	19,920	30,543	23,520
Value.....	\$373,891	\$542,348	\$343,385
All other products, value.....	\$1,034,934	\$1,310,640	\$741,577
<b>MACHINERY.</b>			
Paper machines:			
Fourdrinier—			
Number.....	16	12	10
Capacity in tons of paper, 24 hours....	208	150	200
Cylinder—			
Number.....	21	20	21
Capacity in tons of paper, 24 hours....	102	88	73
Yearly capacity of mills in pulp, tons.....	97,494	77,661	96,809
Yearly capacity of mills in paper, tons.....	85,605	71,719	84,742

<sup>1</sup> Not reported.

The total value of all products for the industry was \$4,776,387 in 1914 and \$3,831,448 in 1904, the increase during the decade being \$944,939, or 24.7 per cent. The pulp wood used in the pulp mills in 1914 consisted principally of spruce, with small quantities of balsam fir, poplar, and hemlock. The number of cords of pulp wood consumed in 1914 showed a decrease as compared with the consumption in 1904, although there was a considerable increase in its cost.

Wood pulp purchased aggregated 27,000 tons in 1914, sulphite fiber representing 48.2 per cent of the total quantity and 56.7 per cent of the total cost. "Other chemical fiber" includes soda and sulphate fiber, the latter being the more important. The large amount reported under "all other materials" includes the cost of rags, manila stock, chemicals, sizing, fuel, rent of power, and freight.

News paper was the principal product in both 1914 and 1904. There was a decrease, however, during the decade, of 3,173 tons, or 9.2 per cent, in quantity, and \$44,192, or 3.2 per cent, in value. For the five-year period, 1904-1909, this product showed a decrease of 17,941 tons, or 52.2 per cent, in quantity, and \$708,841, or 50.7 per cent, in value. For the five-year period, 1909-1914, however, the quantity increased 14,768 tons, or 89.7 per cent, and the value \$664,649, or 96.6 per cent. Wrapping paper and tissue paper each showed decreases both in quantity and value during the five-year period 1909-1914. Boards decreased in quantity and value from 1904 to 1909 but increased from 1909 to 1914, the increase for the decade being 57.5 per cent in quantity and 33.9 per cent in value. Ground wood pulp, for use in establishments other than those in which produced, increased in quantity and value from 1904 to 1909 and decreased in each respect from 1909 to 1914. For the decade 1904-1914, however, although there was a decrease in quantity of 3,600 tons, the value increased \$30,505. The total quantity of wood pulp manufactured in the state in 1914, including that used in the mills where produced, aggregated 63,004 tons, of which ground wood pulp represented 86.3 per cent. The item "all other products" includes fine paper, hanging paper, coated book paper, cardboard, bristol board, sulphite fiber, screenings, and products other than paper and pulp manufactured by the paper and pulp mills of the state as subsidiary products. The capacity of both the pulp mills and the paper mills in 1914 shows a small increase as compared with 1904.

**Flour-mill and gristmill products.**—Table 25 gives the quantities and values of flour-mill and gristmill products for the last three census years.

Vermont was the only New England state not showing a decrease in the total value of products in this industry between 1909 and 1914. The increase, however, was small—\$9,517, or only two-tenths of 1 per cent. As will be seen by the table, corn meal and feed formed the major part of the total products, both as to

quantity and value. These two classes of products are so closely allied in their general uses, corn meal being used both for human and animal consumption, and are so reported by many establishments that they may with propriety be considered together; and when thus combined they represent 97.9 per cent of the total value of products in 1914 and 97.8 per cent in 1909. The other items shown in the table are unimportant in Vermont, both as to quantities and values. The equipment reported for 1914 consisted of 30 stands of rolls, 75 runs of stone, and 130 attrition mills. Comparable statistics for 1909 are not available.

Table 25	1914	1909	1904
Total value.....	\$4,142,854	\$4,133,337	\$3,206,075
Wheat flour:			
Barrels.....	3,133	169	3,025
Value.....	\$17,467	\$1,014	\$14,664
Rye flour:			
Barrels.....	144	404	365
Value.....	\$580	\$1,408	\$1,594
Buckwheat flour:			
Pounds.....	456,333	363,550	196,350
Value.....	\$13,844	\$9,376	\$5,825
Corn meal and corn flour:			
Barrels.....	453,617	353,051	909,780
Value.....	\$1,453,199	\$2,511,964	\$2,109,276
Bran and middlings:			
Tons.....	710	12	103
Value.....	\$20,230	\$433	\$3,380
Feed and offal:			
Tons.....	82,074	48,850	40,461
Value.....	\$2,604,409	\$1,528,928	\$1,032,712
Barley meal, value.....	\$9,041	\$54,185	.....
Hominy and grits, value.....	\$2,100	.....	.....
Oatmeal, value.....	\$10,254	.....	.....
All other products, value.....	\$5,730	\$28,031	\$38,624

**Woolen and worsted goods.**—Table 26 shows, in considerable detail, for 1914, 1909, and 1904, the quantities and cost of materials used in this industry and the quantities and values of the principal products.

Table 26	1914	1909	1904
MATERIALS USED.			
Total cost.....	\$2,988,612	\$2,870,001	\$2,704,111
Wool (in condition purchased):			
Pounds.....	1,567,230	1,620,956	3,264,133
Cost.....	\$676,918	\$677,308	\$673,988
Equivalent in scoured condition (pounds).....	1,513,524	1,185,432	2,004,874
Rags, tailor's clippings, etc.:			
Pounds.....	1,975,280	1,823,286	2,120,824
Cost.....	\$166,454	\$140,386	\$220,990
Recovered wool fiber:			
Pounds.....	777,810	824,259	991,608
Cost.....	\$90,480	\$120,774	\$153,346
Cotton:			
Pounds.....	505,854	184,954	1,057,280
Cost.....	\$69,781	\$30,230	\$135,705
Yarns, purchased:			
Pounds.....	979,106	1,805,180	1,316,052
Cost.....	\$532,510	\$1,033,028	\$363,872
Chemicals and dyestuffs, cost.....	\$161,674	\$161,175	\$172,971
Fuel and rent of power, cost.....	\$137,986	\$145,331	\$115,337
All other materials, cost.....	\$1,152,800	\$520,769	\$648,903
PRODUCTS.			
Total value.....	\$4,634,593	\$4,498,903	\$4,608,405
All-wool woven goods:			
Square yards.....	4,711,090	4,744,604	4,836,185
Value.....	\$2,772,917	\$2,809,133	\$2,738,140
Cotton-mixed woven goods:			
Square yards.....	2,281,201	2,273,010	2,727,203
Value.....	\$756,990	\$535,664	\$819,784
Cotton-warp woven goods:			
Square yards.....	3,416,756	2,676,791	3,376,997
Value.....	\$683,737	\$996,332	\$1,131,645
All other products, value.....	\$420,949	\$85,724	\$8,836



As shown in Table 31, there were 17 establishments engaged in this industry in Vermont at each of the three censuses. Although a small increase in the cost of materials was shown at each successive census, the total value of products decreased slightly from 1904 to 1909 but increased from 1909 to 1914, so that the total decrease for the decade was \$63,812, or 1.4 per cent.

In 1904 the cost of wool represented more than one-third of the total cost of materials, but in 1909 and 1914 this item formed less than one-fourth of the total "Yarns, purchased" increased in cost and quantity from 1904 to 1909 but decreased from 1909 to 1914, showing, however, an increase in cost for the decade. Of the total cost of all materials, purchased yarns formed 37.6 per cent in 1909, as compared with 13 per cent in 1904, and 17.8 per cent in 1914.

The value of all-wool woven goods formed more than one-half the total value of products at each of the three censuses, 59.8 per cent in 1914, 64.5 per cent in 1909, and 58.3 per cent in 1904.

There have been increases from census to census in the numbers of producing spindles and of looms in the state. The number of spindles increased from 50,738 in 1904 to 51,404 in 1909 and to 62,864 in 1914, and the number of looms from 965 in 1904 to 1,297 in 1909 and to 1,300 in 1914.

**Laundries.**—Statistics for power laundries are not included in the general tables or in the totals for manufacturing industries. Table 27, however, summarizes these statistics for Vermont for 1914 and 1909:

	POWER LAUNDRIES.		
	Number or amount.		Per cent of increase, 1909-1914. <sup>1</sup>
	1914	1909	
Number of establishments.....	41	32	.....
Persons engaged.....	441	342	28.0
Proprietors and firm members.....	49	37	.....
Salaried employees.....	14	0	.....
Wage earners (average number).....	378	209	20.4
Primary horsepower.....	518	349	48.4
Capital.....	\$233,682	\$144,393	61.8
Salaries and wages.....	153,642	104,769	46.6
Salaries.....	7,628	3,021	152.2
Wages.....	146,014	101,748	43.5
Paid for contract work.....	3,580	233	1,427.9
Rent and taxes (including internal revenue).....	10,309	7,470	38.0
Cost of materials.....	63,214	32,217	96.2
Amount received for work done.....	362,041	213,753	48.5

<sup>1</sup> Percentages are omitted where base is less than 100.

In both 1914 and 1909 Vermont ranked forty-fifth among the states in amount received for work done and forty-fourth in number of persons engaged in the industry, the latter rank being the same as that of the state in estimated population in 1914. The foregoing summary shows increases for all items given, that for amount received for work done being \$118,288, or 48.5 per cent. No laundries were reported as under corporate ownership at either census, most of them—34 in 1914 and 27 in 1909—being owned by individuals, and the remainder—7 and 5, respectfully—being reported

as under "All other" forms of ownership. Establishments owned by individuals also reported the greater part of the amount received for work done, 80.5 per cent in 1914 and 69.5 per cent in 1909.

Table 28 shows, for 1914 and 1909, the number of wage earners employed in the laundries on the 15th day of each month, or the nearest representative day, and the percentage which this number represents of the greatest number employed in any month of the same year. It will be noted, however, that in the monthly employment of wage earners there was a much greater variation in 1909 than in 1914.

MONTH.	WAGE EARNERS.			
	Number.		Per cent of maximum.	
	1914	1909	1914	1909
January.....	364	274	90.8	81.3
February.....	363	269	90.5	79.8
March.....	366	270	91.3	80.1
April.....	369	285	92.0	84.6
May.....	374	296	93.3	87.8
June.....	384	315	95.8	93.5
July.....	400	337	99.8	100.0
August.....	401	331	100.0	98.2
September.....	393	313	98.0	92.9
October.....	386	309	96.3	91.7
November.....	377	290	94.0	86.1
December.....	360	295	92.0	87.5

Table 29 gives the kinds of power used in the laundries of the state in 1914 and 1909, together with the percentages of increase for the five-year period.

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.		
			Amount.		Per cent of in- crease, 1909- 1914. <sup>1</sup>
	1914	1909	1914	1909	
Primary power, total.....	56	39	518	349	48.4
Owned.....	28	20	415	290	40.2
Steam.....	27	25	413	283	57.0
Internal combustion.....	1	2	2	11	.....
Water wheels and motors.....	.....	2	.....	22	.....
Rented.....	28	10	103	53	.....
Electric.....	28	10	103	43	.....
Other.....	.....	.....	.....	10	.....
Generated in establishments reporting electric.....	.....	.....	10	.....	.....

<sup>1</sup> Percentages are omitted where base is less than 100.

Table 30 shows the kinds and quantities of fuel used in the laundries, as reported at the censuses of 1914 and 1909, with the percentages of increase.

KIND.	Unit.	QUANTITY.		Per cent of increase, 1909-1914. <sup>1</sup>
		1914	1909	
Anthracite coal.....	Tons, 2,240 lbs.....	360	313	15.0
Bituminous coal.....	Tons, 2,000 lbs.....	3,481	2,225	56.4
Coke.....	Tons, 2,000 lbs.....	104	24	.....
Oil, including gasoline.....	Barrels.....	18	63	.....
Gas.....	1,000 cubic feet.....	1,056	1,070	-1.3
Wood <sup>2</sup> .....	Cords.....	.....	218	.....

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100.

<sup>2</sup> Not called for at the census of 1914.

## GENERAL TABLES.

Table 31 gives, for 1914, 1909, and 1904, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products, for selected industries in the state; and for the cities having more than 10,000 inhabitants, similar data for all industries combined.

Table 32 presents, for 1914, statistics in detail for each industry in the state that can be shown without the disclosure of individual operations, and the statistics for all industries combined for each of the three cities in the state having more than 10,000 inhabitants.

TABLE 31.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Expressed in thousands.			INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Expressed in thousands.		
					Wages.	Cost of mate- rials.	Value of prod- ucts.						Wages.	Cost of mate- rials.	Value of prod- ucts.
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.															
All industries.....	1914	1,772	32,704	173,037	\$18,617	\$42,706	\$76,091	Foundry and machin- shop products.	1914	40	1,873	5,080	\$1,088	\$1,062	\$3,428
	1909	1,958	33,788	159,445	17,272	34,823	68,310		1909	56	1,860	4,519	1,085	1,335	3,755
	1904	1,699	33,106	140,616	15,221	32,430	63,084		1904	60	1,818	2,879	902	943	3,379
Agricultural implements..	1914	9	311	1,245	182	310	690	Furniture.....	1914	15	1,035	3,241	514	754	1,643
	1909	11	300	1,194	185	272	582		1909	19	1,119	2,707	498	703	1,618
	1904	10	247	660	114	182	442		1904	23	1,112	3,298	424	708	1,533
Bread and other bakery products.	1914	85	357	204	204	813	1,403	Gas, illuminating and heating.	1914	9	59	1,543	32	122	337
	1909	75	242	136	121	624	994		1909	9	70	153	43	100	278
	1904	57	187	93	84	277	409		1904	6	29	187	13	38	129
Butter, cheese, and con- densed milk.	1914	173	471	2,701	314	7,976	8,606	Hosiery and knit goods....	1914	7	963	870	484	1,404	2,146
	1909	186	519	2,944	292	7,050	8,112		1909	8	946	962	411	1,089	1,799
	1904	220	419	2,564	223	5,816	6,416		1904	11	916	1,351	306	1,216	1,995
Canning and preserving, fruits and vegetables.	1914	6	95	296	33	228	402	Lumber and timber prod- ucts.	1914	516	4,108	35,956	2,100	3,981	8,768
	1909	8	118	240	46	214	330		1909	593	4,790	41,937	2,013	4,131	8,598
	1904	7	57	124	17	63	123		1904	493	5,614	39,009	2,343	4,656	9,477
Cars and general shop construction and re- pairs by steam-railroad companies.	1914	5	1,345	1,488	727	577	1,355	Marble and stone work....	1914	276	9,018	34,012	6,004	3,684	12,605
	1909	7	992	965	546	529	1,135		1909	342	10,411	29,107	6,404	2,518	12,395
	1904	6	833	1,010	460	377	800		1904	229	8,097	14,832	4,455	2,010	9,570
Clothing, men's, including shirts.	1914	10	988	267	420	736	1,442	Musical instruments, pianos and organs and materials.	1914	5	546	1,485	331	506	1,070
	1909	11	1,281	323	404	591	1,274		1909	4	610	1,995	327	402	1,268
	1904	11	1,268	432	337	597	1,200		1904						
Clothing, women's .....	1914	7	387	203	126	353	691	Paper and wood pulp.....	1914	23	1,264	42,066	811	3,004	4,776
	1909	6	333	150	110	285	503		1909	25	1,030	38,191	594	2,455	3,902
	1904	8	546	233	179	424	722		1904	28	1,280	42,952	617	2,540	3,831
Confectionery.....	1914	4	151	172	59	251	400	Patent medicines and compounds.	1914	12	119	283	57	327	1,019
	1909	10	145	112	45	214	356		1909	15	161	333	68	556	1,290
	1904	4	123	110	40	136	240		1904	20	198	268	81	370	1,398
Cooperage and wooden goods, not elsewhere specified.	1914	15	260	1,457	112	107	322	Printing and publishing...	1914	111	651	784	409	297	1,243
	1909	25	635	2,203	263	240	693		1909	115	666	625	326	250	1,039
	1904	23	471	1,537	166	150	445		1904	104	604	420	271	236	932
Copper, tin, and sheet- iron products.	1914	17	113	122	72	281	478	Wood, turned and carved..	1914	33	361	2,595	161	166	414
	1909	19	149	240	78	205	425		1909	31	390	1,983	153	178	463
	1904	5	73	12	39	34	135		1904						
Flour-mill and gristmill products.	1914	125	179	7,355	105	3,659	4,143	Woolen and worsted goods.	1914	17	2,226	8,841	1,167	2,989	4,635
	1909	133	156	8,714	76	3,523	4,133		1909	17	2,204	7,213	1,043	2,879	4,497
	1904	109	185	7,043	91	2,872	3,206		1904	17	2,235	7,120	923	2,794	4,698
Food preparations.....	1914	11	141	1,123	81	3,021	3,468	All other industries.....	1914	241	5,663	17,458	3,025	6,068	11,362
	1909	5	33	219	15	365	492		1909	228	4,478	12,244	2,126	4,074	8,462
	1904								1904	248	6,789	14,456	2,906	5,991	11,848

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

BAREE.....	1914	110	2,366	5,975	\$1,904	\$1,336	\$4,262	RUTLAND.....	1914	65	1,771	3,159	1,055	1,610	3,277
	1909	139	2,340	4,645	1,814	1,108	3,852		1909	63	1,636	1,862	763	1,207	2,680
	1904	105	2,198		1,615	909	3,373		1904	51	1,803		857	1,162	2,523
BURLINGTON.....	1914	87	2,132	8,004	1,030	4,109	6,637								
	1909	82	2,371	8,359	991	4,130	6,800								
	1904	67	2,300		836	3,804	6,356								

<sup>1</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.

<sup>2</sup> Includes "tinware."

<sup>3</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.

<sup>4</sup> Figures not available.

<sup>5</sup> Includes "engines, steam, gas, and water," "hardware," "hardware, saddlery," and "steam fittings and steam and hot-water heating apparatus."

<sup>6</sup> Includes "boxes, wooden packing," "lumber, planing-mill products, not including planing mills connected with sawmills," and "pulp wood."

<sup>7</sup> Includes "printing and publishing, book and job," and "printing and publishing, newspapers and periodicals."

## MANUFACTURES—VERMONT.

TABLE 32.—DETAILED STATEMENT FOR THE STATE, BY INDUSTRIES.

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

## THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

1	All industries.....	1,772	37,217	1,787	900	1,171	580	32,704	Ap 34,104	Aug 31,213	(3)	(3)	(3)	(3)	(3)	\$79,846,775
2	Agricultural implements.....	9	352	5	15	15	0	311	Ja 336	Jy 238	324	310	8			1,050,345
3	Awnings, tents, and sails.....	3	22	0	1	2		13	Ja 18	Ja 0	13	2	3	4	4	40,080
4	Baskets, and rattan and willow ware.....	5	59	8	2	2		48	Mh 65	De 42	42	42				48,600
5	Boxes and cartons, paper.....	3	51	1	2	1	0	40	De 61	Oc 38	45	19	20			21,010
6	Boxes, wooden packing.....	16	494	18	22	5	0	443	No 483	Ja 400	408	405	33			1,037,077
7	Bread and other bakery products.....	85	482	95	0	9	12	357	Aug 378	Fe 335	355	295	54	4	2	470,842
8	Brick.....	4	52	2	2	1		47	Jy 118	Mh 8	118	118				92,549
9	Butter.....	143	504	84	45	10	29	330	Jy 379	De 278	337	328	6	3	1	953,523
10	Canning and preserving, fruits and vegetables.....	6	113	0	8	4		95	Se 505	Ja 5	540	345	101	4		297,800
11	Carriages, wagons, and repairs.....	31	94	34				60			72	72				157,133
12	Carriages and wagons.....	27	78	30				48	No 53	Jy 45	52	52				126,410
13	Repair work only.....	4	16	4				12	Oc 21	Mh 4	20	20				30,723
14	Cars and general shop construction and repairs by electric-railroad companies.....	8	22		1			21	No 25	Aug 19	21	21				50,418
15	Cars and general shop construction and repairs by steam-railroad companies.....	5	1,300		23	25	0	1,345	Mh 1,411	Se 1,253	1,380	1,380				710,430
16	Cheese.....	27	38	12		2	1	23	Oc 40	Fe 10	28	27	1			75,932
17	Clothing, men's and youths.....	6	490	3	11	10	7	462	Fe 486	Se 306	472	42	430			628,830
18	Clothing, women's.....	7	440	3	11	25	20	387	Ap 448	Aug 285	438	37	401			408,377
19	Condensed milk and milk products, other than butter and cheese.....	3	135		5	10	2	118	Je 160	Fe 84	104	95	9			538,232
20	Confectionery and ice cream.....	10	210	9	8	21	13	105	Oc 172	Ja 132	182	82	100			310,550
21	Confectionery.....	4	193	2	7	21	12	151	Aug 21	Mh 10	109	69	100			280,141
22	Ice cream.....	6	23	7	1			14	Aug 21	Mh 10	13	13				21,418
23	Cooperage, other than hogsheads and barrels.....	7	210	7	7	3	3	109	Mh 203	De 99	210	200	1			303,002
24	Copper, tin, and sheet-iron work.....	14	148	19	0	33	7	83	Mh 115	Jy 52	110	110				385,286
25	Cotton goods.....	4	1,025		18	10	5	992	De 1,025	Ja 930	1,038	632	400	5	1	2,570,201
26	Flour-mill and gristmill products.....	125	351	154	4	9	5	179	De 183	Jy 174	179	178		1		1,006,167
27	Food preparations, not elsewhere specified.....	11	202	3	15	30	13	141			143	128	15			821,746
28	Sirups and cereals.....	7	68	2	5	11	5	45	Je 60	De 32	52	40	12	3		214,750
29	For animals and fowls.....	4	134	1	10	10	8	90	Se 105	Je 87	91	88	3			606,087
30	Foundry and machine-shop products.....	34	1,668	17	68	94	37	1,752			1,722	1,702	20			5,752,563
31	Machine shops.....	30	1,790	15	62	93	34	1,580	Ap 1,730	No 1,392	1,540	1,531	18			5,596,392
32	Foundries.....	4	178	2	6	1	3	160	De 238	Aug 82	173	171	2			150,171
33	Furniture, wood, other than rattan and willow.....	15	1,116	0	20	31	15	1,035	Mh 1,123	De 945	1,004	977	22	5		2,005,300
34	Gas, illuminating and heating.....	9	99		22	0	9	59	Se 63	De 57	57	57				2,443,740
35	Hosiery and knit goods.....	7	980	7	11	7	1	903	My 1,000	Se 705	814	203	518	2	1	1,394,600
36	Lime.....	8	149	8	0	3		132	No 144	Fe 110	135	135				307,554
37	Lumber and timber products.....	443	3,749	511	64	32	15	3,127	Ap 3,727	Aug 2,440	4,521	4,518	1	2		6,581,485
38	Lumber, planing-mill products, not including planing mills connected with sawmills.....	50	655	61	20	34	12	528	Aug 550	De 490	550	549	1			1,615,237
39	Marble and stone work.....	270	9,915	369	189	218	121	9,018			8,744	8,735	3	6		12,970,011
40	Marble and stone work.....	221	7,905	300	143	100	100	7,257	Aug 7,482	De 6,588	6,817	6,812	3	2		11,800,348
41	Roofing slate.....	33	1,506	44	32	21	0	1,460	Se 1,530	Fe 1,334	1,570	1,572				993,752
42	Slate, other than roofing.....	22	383	25	14	7	0	331	Ja 365	De 294	351	351				582,911
43	Mineral and soda waters.....	17	58	20	1	4	2	31	Jy 50	Ja 12	33	31	2			93,905
44	Minerals and earths, ground.....	7	256	4	12	9	1	230	Aug 278	Fe 154	226	226				852,408
45	Paper and wood pulp.....	23	1,593	15	50	49	15	1,204			1,300	1,300	66			9,724,145
46	Paper mills.....	13	424	12	28	18	4	302	Oc 393	Aug 318	309	313	50			1,430,074
47	Pulp mills.....	4	110	3	0	2		99	Ap 122	Aug 75	98	98				600,914
48	Paper and pulp mills.....	6	859		16	29	11	803	Se 973	Mh 722	899	889	10			7,092,257
49	Patent medicines and compounds.....	12	203	11	11	40	22	119	Mh 126	Aug 111	122	54	68			748,585
50	Paving materials.....	3	11	1				10	My 18	De 0	16	16				35,100
51	Printing and publishing, book and job.....	55	382	57	16	3	9	297	My 309	Aug 288	292	229	62	1		473,458
52	Printing and publishing, newspapers and periodicals.....	56	506	45	33	30	38	354			353	268	85			797,339
53	Printing and publishing.....	8	149	4	9	20	6	110	My 307	Aug 280	108	95	13			323,547
54	Printing, publishing and job printing.....	42	340	41	20	14	21	244	Ja 2	Jy 2	245	173	72			463,317
55	Publishing without printing.....	6	17		4	2	11									10,475
56	Pulp wood.....	7	21	11				10	Jy 27	Ja 0	21	21				71,796
57	Pumps, not including power pumps.....	3	0	3				6	(9)	(9)	6	6				10,450
58	Saddlery and harness.....	7	22	8	1			13	Fe 10	De 11	12	12				10,077
59	Shirts.....	4	539		5	3	5	526	Ja 618	Oc 288	497	80	358	2	1	212,032
60	Tinware, not elsewhere specified.....	3	38	5	2		1	30	Fe 47	Se 22	28	25	3			69,882

1 Owned power only.

2 Includes rented power, other than electric.

3 No figures given for reasons stated under "Explanation of terms."

# MANUFACTURES—VERMONT.

1537

AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914.

EXPENSES.							Value of products.	Value added by manufacture.	POWER.						
Salaries and wages.			For contract work.	Rent and taxes.		For materials.			Primary horsepower.					Electric horsepower generated in establishments reporting.	
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.			Fuel and rent of power.	Total.	Steam engines. <sup>1</sup>	Internal-combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>		Electric (rented).

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

\$1,778,963	\$1,605,624	\$18,617,075	\$1,162,281	\$258,703	\$574,214	\$40,886,804	\$1,818,826	\$76,090,974	\$34,285,254	173,937	62,800	3,200	80,400	27,477	19,684	1
31,604	14,445	182,488	12,293	209	6,115	278,547	31,620	696,294	386,127	1,245	285	25	410	525	2	
1,600	2,200	8,348		120	285	19,381	425	38,097	18,291	9				9	3	
486	1,216	21,310		500	561	10,074	870	47,835	30,891	255	130		115	10	4	
1,903	626	18,005		2,400	361	22,271	822	51,175	28,082	20	15			5	5	
24,213	7,500	205,076	11,730	2,258	4,873	483,332	6,121	842,270	352,817	1,397	1,067	63	208	59	203	6
10,812	14,377	203,523	329	19,326	5,420	786,691	26,031	1,402,663	589,941	264	38	37	4	185	7	
2,400	400	25,504		500	744	1,522	9,809	51,305	39,983	125	70			55	8	
35,556	15,108	220,856	31,705	5,666	8,545	6,395,371	46,433	6,017,182	476,378	2,338	1,670	131	372	255	16	9
9,005	4,627	32,877	1,197	1,120	1,351	224,797	3,029	402,330	174,504	296	227	4		65	10	10
		36,034		1,125	1,176	41,386	2,486	117,835	74,013	349				75	11	11
		28,996		1,075	991	34,463	2,159	109,235	63,613	318				50	12	12
		7,038		50	185	6,023	277	17,600	10,400	31		6		25	13	13
811		13,563			135	21,373	354	36,236	14,509	10				10	8	14
31,346	18,866	727,041			100	522,497	54,820	1,354,671	777,354	1,483	299			1,189	25	15
413	408	14,105	1,113	880	687	353,057	2,946	398,450	42,447	106	80	16		10	16	16
24,370	21,084	176,681		2,960	4,455	574,333	3,560	952,413	374,514	89				89	17	17
26,215	41,049	125,227		372	2,912	349,116	4,030	691,201	338,055	203	70		80	53	70	18
8,408	11,305	78,602		657	4,083	1,148,998	20,485	1,880,283	201,800	257	245			12	48	19
7,029	23,063	65,972		2,340	6,304	301,411	5,398	498,302	191,403	191	140			51	27	20
7,429	22,543	59,106		1,300	6,116	246,726	4,675	399,763	148,462	172	140			32	27	21
500	520	6,866		1,040	188	64,685	823	98,539	43,031	19				19		22
4,200	3,541	86,124	22,400		2,405	63,618	106	206,101	145,477	1,138	650	28	460			23
7,400	34,228	55,310		1,004	3,103	158,194	1,460	329,821	170,167	43		6		37		24
34,398	9,345	450,152		15,484	891,442	60,810	1,558,974	606,713	4,033	2,613			1,350	970	8	25
2,248	5,203	105,051	500	6,187	14,826	3,616,025	13,025	4,142,354	483,804	7,355	278	494	5,742	841	242	26
90,330	52,377	81,116	90	6,600	6,691	3,007,250	13,547	3,497,741	476,938	1,123	175	100		839	11	27
18,400	30,922	25,083	90	3,704	3,501	421,948	4,101	649,777	223,728	257	175			82	11	28
50,930	21,455	56,033		2,836	3,190	2,585,308	9,440	2,847,064	253,210	806		109		757		29
157,251	141,040	1,020,456		7,483	48,809	904,016	73,558	3,209,075	2,232,401	4,804	2,203	109	1,169	1,383	2,028	30
147,276	139,184	920,080		6,408	46,213	834,213	65,080	3,004,726	2,105,433	4,549	2,078	69	1,054	1,348	1,888	31
9,076	2,750	108,767		1,080	2,656	69,803	8,478	205,249	126,968	315	125	40	115	35	140	32
67,850	44,405	514,422	328	1,362	12,874	730,489	23,249	1,042,780	889,054	3,241	2,498		410	333	365	33
23,460	10,902	32,406	200		10,832	25,984	96,415	337,262	214,863	1,543	1,480			63		34
23,876	11,499	483,818	8,291	10,935	9,154	1,373,040	30,922	2,164,897	760,935	870	515		234	121	150	35
6,120	2,000	63,946	200		1,883	37,024	60,935	189,818	91,359	149	119	10		20		36
100,828	52,489	1,598,720	824,254	4,552	66,605	2,021,761	21,779	5,913,323	3,899,783	33,936	18,032	566	14,030	1,308	753	37
30,866	43,704	291,079	9,520	8,362	17,652	1,407,541	15,864	1,955,654	532,249	3,623	2,191	97	730	605		38
293,564	293,803	6,004,024	102,267	70,565	90,904	3,261,209	422,295	12,605,417	8,021,913	34,012	9,219	151	12,322	12,320	10,835	39
242,490	259,379	5,065,001	97,937	52,953	84,744	3,028,958	352,271	11,066,400	7,686,171	27,981	5,958	133	11,950	9,931	10,830	40
35,164	28,901	752,262	4,121	14,813	3,630	96,189	52,910	1,123,492	974,393	4,621	2,881	8		1,732		41
16,910	5,523	186,761	209	2,799	2,521	136,062	17,114	415,625	262,349	1,410	380	10	363	657	6	42
780	3,452	19,576		2,204	967	32,007	1,008	85,570	52,504	52	20	12	2	18		43
23,098	11,812	143,310	3,578	80	1,920	49,057	46,090	422,061	327,514	1,427	545	100	80	702	35	44
133,016	61,054	811,124	500	35,887	56,895	2,676,802	327,563	4,776,387	1,772,022	42,066	5,321	500	35,595	650	2,319	45
75,046	19,005	204,054	500	18	13,451	1,051,913	87,496	1,613,028	473,619	4,562	1,390	500	2,110	562	30	46
8,023	2,924	56,284		3,101	149,596	2,523	240,472	88,353	240,472	7,225	325		6,900		455	47
49,947	30,125	550,180	35,869	40,333	1,475,293	237,544	2,922,887	1,210,050	30,279	30,279	3,606		26,585	88	1,834	48
41,575	115,609	57,343		3,036	7,986	317,262	9,561	1,018,651	691,828	283	6	4	150	123	150	40
		6,121			281	850	735	13,855	12,270	105	30			75		50
23,610	10,607	189,080	5,609	14,050	3,721	135,754	7,499	508,559	365,306	313		15	7	291	8	51
51,888	48,010	220,325	13,470	9,761	7,239	139,898	13,041	734,385	580,846	471	59	31	7	374		52
16,147	20,340	90,404		3,650	2,849	50,047	5,032	284,487	228,208	200	18	5	4	179		53
30,041	21,104	129,861	906	5,627	4,300	89,251	8,009	411,831	314,571	265	41	26	3	165		54
5,700	6,572		12,564	484	81			38,067	38,067							55
		4,697	14,858		308	24,296		57,206	32,910							56
		4,903		100	261	19,507	336	39,326	10,483							57
1,020		7,662		698	93	16,188	56	31,544	15,270	17						58
11,510	6,651	243,460	83,129	1,721	1,125	154,075	4,433	489,530	331,022	208	70		67	71		59
2,690	804	16,299		600	936	114,359	6,890	147,918	26,069	79	30	30		19		60

\* Same number reported for one or more other months.

\* None reported for one or more other months.

\* Same number reported throughout the year.

MANUFACTURES—VERMONT.

TABLE 32.—DETAILED STATEMENT FOR THE STATE, BY INDUSTRIES,

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					
		Total.	Proprietors and firm members.	Salaried officers, superintendents and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 10.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.	Female.	
								Maximum month.	Minimum month.						
															Capital.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

1	Tobacco, cigars.....	25	82	20	3	2	51	So	50	Ja	34	55	48	7	.....	.....	\$42,210
2	Tools, not elsewhere specified.....	5	244	1	10	10	215	Ja	244	Oc	100	101	173	18	.....	.....	379,115
3	Toys and games.....	4	175	5	0	2	100	Oc	188	An	135	154	105	49	.....	.....	204,263
4	Vinager and cider.....	10	32	10	1	1	14	Oc	43	Do <sup>a</sup>	5	30	35	.....	4	.....	77,024
5	Window shades and fixtures.....	3	142	1	7	3	120	Ja	134	Fe	110	128	118	10	.....	.....	300,108
6	Wood, turned and carved.....	33	415	41	9	3	361	Fe	417	Jy	324	405	383	20	2	.....	470,028
7	Wooden goods, not elsewhere specified.....	8	75	7	5	.....	61	My	63	Jy	58	62	42	20	.....	.....	67,518
8	Woolen and worsted goods.....	17	2,372	4	40	60	2,226	Do	2,020	Fe	1,843	3,062	2,230	831	1	.....	6,258,265
9	All other industries *.....	90	4,679	58	125	273	4,118									.....	13,150,112

## CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED: 1914.

1	BARRE.....	110	2,077	157	67	78	9	3,366	So	2,425	Fe <sup>a</sup>	2,243	2,415	2,404	9	2	.....	\$2,597,702
2	BURLINGTON.....	87	2,500	04	100	129	75	2,132	No	2,188	Au	2,025	2,243	1,628	713	2	.....	6,224,743
3	RUTLAND.....	65	2,035	59	71	98	36	1,771	Fe	1,010	D <sup>e</sup>	1,565	1,843	1,593	240	4	0	3,078,211

<sup>1</sup> Owned power only.

<sup>2</sup> Includes rented power, other than electric.

*All other industries embrace—		
Ammunition.....	1	
Artificial stone products.....	1	
Automobile bodies and parts.....	1	
Bags, other than paper.....	1	
Bookbinding and blank-book making.....	2	
Boots and shoes.....	2	
Boxes, cigar.....	4	
Brass, bronze, and copper products.....	2	
Brushes.....	3	
Carpets, rag.....	1	
Cleaning and polishing preparations.....	1	
Coffee, roasting and grinding.....	1	
Coffins, burial cases, and undertakers' goods.....	2	
Collars and cuffs, men's.....	1	
Cutlery and edge tools.....	2	
Dairy men's supplies.....	5	
Electrical machinery, apparatus, and supplies.....	1	
Electroplating.....	1	
Engines, steam, gas, and water.....	2	
Fancy articles, not elsewhere specified.....	2	
Flavoring extracts.....	2	
Fur goods.....	2	
Furnishing goods, men's.....	3	
Grease and tallow.....	1	
Hand stamps.....	1	
Hardware.....	2	
Hardware, saddlery.....	2	

AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					Electric horse-power generated in establishments reporting.
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal-combustion engines. <sup>2</sup>	Water wheels and motors. <sup>1</sup>	Electric (rented).	

## THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

\$3,040	\$1,560	\$28,640	.....	\$2,781	\$9,277	\$44,944	\$327	\$106,502	\$61,231	1	.....	.....	.....	1	.....	1
22,582	10,885	107,041	.....	570	6,306	145,281	7,156	354,725	202,288	715	400	57	155	103	52	2
7,480	2,861	65,519	.....	1,238	1,528	49,075	2,654	160,271	108,542	330	250	.....	.....	80	4	3
600	1,780	6,220	.....	67	539	28,387	886	64,316	35,043	486	99	07	272	48	.....	4
8,720	3,640	54,169	.....	2,318	2,009	151,143	321	268,161	111,697	321	185	10	85	41	.....	5
13,250	2,138	101,257	\$2,447	993	4,712	161,520	3,980	413,764	248,258	2,595	1,535	26	884	150	.....	6
7,244	708	25,975	1,500	1,780	630	42,244	1,522	112,036	69,170	319	100	52	125	42	.....	7
100,097	81,340	1,167,272	58,610	1,690	39,960	2,850,616	137,996	4,634,698	1,645,981	8,841	5,210	52	3,576	3	1,650	8
278,741	360,781	2,325,031	2,073	20,735	78,132	4,071,967	183,985	8,028,437	4,072,485	9,834	4,791	296	1,585	3,162	682	9

## CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED. 1914.

\$103,810	\$120,761	\$1,904,495	\$20,718	\$18,369	\$21,315	\$1,170,359	\$160,063	\$4,291,600	\$2,955,148	5,375	872	157	183	4,760	183	1
188,430	220,208	1,029,636	9,006	30,410	58,846	4,001,337	107,267	6,636,956	2,528,352	8,004	6,267	150	615	972	21	2
134,201	110,328	1,054,770	1,090	43,842	27,338	1,532,203	77,593	3,276,709	1,660,853	3,159	1,770	.....	.....	1,389	387	3

<sup>1</sup> Same number reported for one or more other months.

\*All other industries embrace—Continued.

Hones and whetstones.....	1	Refrigerators.....	2	Stoves and ranges.....	1
House-furnishing goods.....	1	Scales and balances.....	3	Stoves, gas and oil.....	1
Leather, tanned, curried, and finished.....	2	Shipbuilding, wooden, including boat building.....	2	Suspenders, garters, and elastic woven goods.....	1
Mattresses and spring beds.....	1	Slaughtering and meat packing.....	3	Upholstering materials, not elsewhere specified.....	1
Musical instruments, organs.....	2	Soap.....	1	Wall plaster.....	2
Musical instruments, piano and organ materials.....	3	Sporting and athletic goods.....	2	Window and door screens.....	1
Paper goods, not elsewhere specified.....	2	Statuary and art goods.....	1	Wirework.....	2
Perfumery and cosmetics.....	1	Steam fittings and steam and hot-water heating apparatus.....	1	Wood distillation.....	1
Photographic apparatus.....	1			Wool shoddy.....	2
Pickles and preserves.....	2				

# VIRGINIA.

By W. G. COPLEY.

## GENERAL STATISTICS.

**General character of the state.**—Virginia, with a gross area of 42,627 square miles, of which 40,262 represent land surface, ranks thirty-third in size among the states. It was one of the original thirteen states and at the first census (1790) ranked first in population, with 747,610. Its inhabitants in 1900 numbered 1,854,184 and in 1910, 2,061,612, and its estimated population in 1914 was 2,150,000. In total population Virginia ranked twentieth in 1910; and in density of population it ranked fourteenth, with 51.2 inhabitants per square mile, the corresponding figure for 1900 being 46.1.

The urban population of the state in 1910—that is, the population residing in cities and towns of 2,500 inhabitants or more—was 476,529, or 23.1 per cent of the total, as against 18.3 per cent in 1900. There were in the state in 1914, 10 cities each having an estimated population of more than 10,000, Alexandria, Danville, Lynchburg, Newport News, Norfolk, Petersburg, Portsmouth, Richmond, Roanoke, and Staunton, but the statistics for Newport News are excluded from all tables in order to avoid a possible disclosure of individual operations in that city. The remaining 9 cities, whose aggregate population in 1914 formed 18.8 per cent of the estimated population of Virginia, reported 48.8 per cent of the value of the state's manufactured products.

The steam-railway mileage in 1914, as reported by the Interstate Commerce Commission, was 4,611, and the electric-railway mileage in 1912 (the latest year for which figures are available) was 528. Chesapeake Bay and the Potomac, Rappahannock, York, James, and Elizabeth Rivers together constitute a factor of great importance in the transportation system of the state.

Agriculture is an important industry in Virginia. The total value of all farm crops in 1909 was \$100,-

531,157, the most important products being corn, \$28,885,944, and tobacco, \$12,169,086. The value of domestic animals sold or slaughtered on farms during the same year was \$28,982,606.

The total value of the state's mineral products in 1914, according to the annual report of the United States Geological Survey, was \$16,400,347, the leading item being bituminous coal, \$8,032,448.

The fishing industry is also important. In 1908 Virginia ranked second among the states in total value of all fishery products and third in value of oysters taken.

The value of merchandise exported during the fiscal year 1914 from the four ports of the Virginia customs district was \$25,625,255, and the value of merchandise imported through the same ports in that year was \$7,177,904.

**Importance and growth of manufactures.**—The value of manufactured products of Virginia in 1914 was \$264,039,041; the average number of wage earners employed in manufacturing industries, 102,820; and the value added by manufacture, \$108,719,465. In 1914 the state ranked twentieth in value of products and seventeenth in the number of wage earners and eighteenth in value added by manufacture; while in 1909 it ranked twenty-second, sixteenth, and twentieth, respectively. The value of manufactured products in Virginia in 1914 and 1909 represented 1.1 per cent of the total for the United States; the corresponding proportion for 1904 was 1 per cent.

Table 1 summarizes the more important statistics relative to all classes of manufactures combined in the state of Virginia for the years 1914, 1909, 1904, and 1899, and gives the percentages of increase from census to census.

Table 1	MANUFACTURING INDUSTRIES.				PER CENT OF INCREASE. <sup>1</sup>		
	1914	1909	1904	1899	1909-1914	1904-1909	1899-1904
Number of establishments.....	5,508	5,685	3,187	3,186	-2.1	78.4	( <sup>2</sup> )
Persons engaged.....	118,109	120,797	88,898	( <sup>3</sup> )	-2.2	35.9	.....
Proprietors and firm members.....	6,125	6,570	3,843	( <sup>3</sup> )	-6.8	80.3	.....
Salaried employees.....	9,164	8,561	4,970	3,828	7.2	72.1	29.8
Wage earners (average number).....	102,820	105,676	80,285	66,223	-2.7	31.6	21.2
Primary horsepower.....	337,567	283,928	176,998	136,696	18.9	60.4	29.5
Capital.....	\$261,501,283	\$216,392,388	\$147,989,182	\$92,299,589	20.8	40.2	60.3
Salaries and wages.....	50,118,282	47,255,356	32,817,864	23,903,498	18.8	44.0	37.3
Wages.....	11,244,847	9,100,700	4,874,800	3,620,609	23.0	86.7	34.3
Paid for contract work.....	44,873,435	38,154,566	27,943,058	20,278,889	17.6	36.5	37.8
Rent and taxes (including internal revenue).....	1,803,922	1,713,523	711,771	( <sup>3</sup> )	10.5	140.7	.....
Cost of materials.....	0,378,527	6,751,151	4,857,071	( <sup>3</sup> )	38.8	.....	.....
Value of products.....	155,319,576	125,582,687	83,619,149	59,359,484	23.7	50.1	40.9
Value added by manufacture (value of products less cost of materials).....	264,039,041	219,793,858	148,856,525	108,044,150	20.1	47.7	37.0
	108,719,465	94,211,171	65,207,376	49,284,666	15.4	44.5	32.3

<sup>1</sup> A minus sign (—) denotes decrease.

<sup>2</sup> Less than one-tenth of 1 per cent.

<sup>3</sup> Figures not available.

<sup>4</sup> Exclusive of internal revenue.



This table shows an increase from census to census in the value of manufactured products of the state, although the percentage of increase was smallest for the five-year period 1909 to 1914.

The number of establishments reported at the census of 1914 shows a decrease of 177, or 3.1 per cent, and the number of persons engaged in manufactures, 2,688, or 2.2 per cent. These decreases are due primarily to the fact that at the census of 1909 reports were secured from a large number of small lumber mills for which no returns were received in 1914. Mills engaged exclusively in custom sawing for local consumption should not be included in the census, but it is not always possible to conduct the enumeration in regard to these establishments on uniform lines at different censuses. The decrease, therefore, in the number of establishments is no indication of a decrease in the manufacturing activities of the state.

The capital invested increased \$45,108,900, or 20.8 per cent, from 1909 to 1914; the average number of wage earners decreased 2,856, or 2.7 per cent; while the amount paid in wages increased \$6,718,869, or 17.6 per cent; the increase in value of products was \$44,245,183, or 20.1 per cent; and the value added by manufacture increased \$14,508,294, or 15.4 per cent.

The totals in this table do not include statistics for an establishment operated by the Federal Government, the United States navy yard at Portsmouth. In 1914 this plant employed an average of 2,386 wage earners, and the value of the work done was reported as \$3,988,278.

Table 2 shows the relative importance of the leading manufacturing industries in 1914, and gives percentages of increase for the three five-year periods from 1899 to 1914.

Table 2

Table 2	CENSUS OF 1911.						PER CENT OF INCREASE.									
INDUSTRY.	Number of establishments.	Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.		
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1909-1914	1901-1909	1899-1904	1909-1914	1901-1909	1899-1904	1909-1914	1901-1909	1899-1904
All industries.....	5,698	102,820	100.0	\$204,039,041	100.0	\$108,719,465	100.0	-2.7	31.6	21.2	20.2	47.7	37.0	15.4	44.5	32.3
Lumber and timber products.....	2,218	26,307	25.6	32,449,093	12.3	19,083,983	17.6	-21.0	119.9	4.5	-0.5	91.5	23.1	13.1	85.6	41.5
Tobacco manufactures.....	70	6,308	6.1	30,065,813	11.4	17,093,876	19.6	-20.0	-0.6	-8.4	18.6	51.4	7.8	29.8	40.5	-1.7
Cars and general shop construction and repairs by steam-railroad companies.....	32	10,375	10.1	18,216,056	6.0	7,454,475	6.9	30.7	3.3	49.2	83.0	14.5	38.5	58.6	14.2	49.9
Flour-mill and gristmill products.....	533	1,082	1.1	18,084,413	6.9	2,604,003	2.5	6.7	0.0	50.1	2.8	27.2	54.7	10.7	46.5	13.0
Fertilizers.....	57	2,470	2.4	11,350,120	4.3	3,354,100	3.1	20.3	8.0	53.8	41.3	72.5	36.4	20.8	86.0	13.0
Peanuts, grading, roasting, cleaning, and shelling.....	25	1,505	1.5	10,981,159	4.2	1,463,083	1.3	-0.7	13.8	.....	38.4	12.4	.....	81.3	-10.9	.....
Cotton goods.....	9	6,310	6.1	10,216,185	3.9	4,158,884	3.8	21.8	46.3	17.0	36.4	67.0	68.0	40.0	65.0	35.3
Leather, tanned, curried, and finished.....	21	1,205	1.2	9,834,439	3.7	1,616,401	1.5	-21.2	50.7	18.7	10.0	41.8	23.6	-11.3	64.0	8.8
Printing and publishing.....	300	2,700	2.7	7,069,844	2.7	5,093,272	4.6	9.2	21.0	26.9	31.7	52.5	40.9	20.2	55.6	37.7
Foundry and machine-shop products.....	193	2,444	2.4	6,906,122	2.6	3,341,435	3.1	-12.7	33.0	.....	20.6	68.8	.....	29.5	29.7	.....
Paper and wood pulp.....	8	1,200	1.2	5,501,084	2.1	2,077,553	1.9	38.2	-8.2	228.8	50.4	20.5	256.0	37.7	21.2	183.6
Slaughtering and meat packing.....	21	300	0.4	4,302,272	1.7	630,708	0.6	15.8	110.5	.....	-5.2	130.5	.....	17.1	117.6	.....
Iron and steel, blast furnaces.....	8	680	0.7	3,772,382	1.4	400,380	0.4	-17.8	22.1	-32.2	-30.0	61.2	-48.6	-40.5	55.1	-70.6
Boots and shoes.....	8	1,555	1.5	3,708,558	1.4	1,147,244	1.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bread and other bakery products.....	140	1,033	1.0	3,697,279	1.4	1,509,690	1.4	18.7	52.9	34.5	33.7	72.2	74.2	44.5	91.7	21.4
Hosiery and knit goods.....	13	2,272	2.2	3,515,016	1.3	1,408,176	1.3	32.5	-0.0	-0.2	42.8	16.8	40.7	41.4	27.4	11.7
Leather goods.....	51	1,428	1.4	3,463,853	1.3	1,520,707	1.4	-4.0	0.1	77.7	-0.8	64.7	113.5	-4.4	63.7	96.8
Clothing, men's, including shirts.....	32	1,282	1.2	2,785,088	1.1	973,410	0.9	10.5	30.2	74.0	52.0	50.3	105.4	47.6	31.8	104.9
Carrriages and wagons and materials.....	119	1,246	1.2	2,748,003	1.0	1,208,701	1.1	-0.2	-0.2	38.2	10.6	8.4	44.5	0.0	9.7	22.9
Canning and preserving.....	413	2,160	2.1	2,359,608	0.9	727,578	0.7	10.6	73.7	.....	27.3	52.2	.....	12.6	82.5	.....
Cooperage.....	110	1,300	1.4	2,230,630	0.8	821,878	0.8	70.4	31.1	.....	104.7	37.5	.....	62.1	25.1	.....
Gas, illuminating and heating.....	22	533	0.5	2,140,038	0.8	1,300,681	1.3	41.0	41.0	101.5	46.1	50.2	102.0	34.5	49.8	97.4
Furniture.....	38	1,221	1.2	2,085,412	0.8	1,005,784	0.9	23.3	38.8	271.4	45.0	70.1	277.0	40.0	60.6	234.1
Confectionery.....	32	480	0.5	1,952,156	0.7	551,443	0.5	40.8	50.0	50.7	28.0	121.7	55.3	30.6	97.2	58.5
Liquors, distilled.....	47	123	0.1	1,840,876	0.7	1,374,743	1.3	-2.4	10.5	72.7	17.7	264.7	67.7	12.5	285.0	73.5
Ice, manufactured.....	87	714	0.7	1,795,645	0.7	1,204,030	1.2	50.3	37.3	68.8	57.1	70.7	48.6	48.0	88.6	44.1
Silk goods, including throwsters.....	9	601	0.7	1,772,931	0.7	679,070	0.6	-15.6	.....	.....	14.8	.....	.....	27.4	.....	.....
Dyestuffs and extracts.....	13	420	0.4	1,676,870	0.6	530,003	0.5	21.0	18.4	.....	39.8	62.8	.....	4.9	40.4	.....
Copper, tin, and sheet-iron products.....	37	528	0.5	1,631,983	0.6	630,183	0.6	-35.5	.....	.....	-30.3	.....	.....	-36.2	.....	.....
Coke, not including gas-house coke.....	11	852	0.8	1,606,800	0.6	536,503	0.5	-40.2	30.3	30.4	-33.5	28.2	75.7	-10.2	-14.8	77.2
Liquors, malt.....	6	310	0.3	1,544,757	0.6	1,012,100	0.9	-12.4	30.1	-0.3	-1.4	34.6	23.4	-16.0	32.6	20.1
Brick, tile, and other clay products.....	64	1,663	1.6	1,403,285	0.6	980,700	0.9	-20.4	6.4	38.5	-22.3	6.5	70.3	-30.5	2.7	60.5
Marble and stone work.....	76	1,260	1.2	1,404,030	0.5	1,015,912	0.9	-20.5	170.0	-12.5	7.5	119.5	0.1	6.4	123.7	6.2
Mineral and soda waters.....	88	200	0.3	1,106,734	0.4	616,224	0.6	30.6	111.4	45.8	92.4	210.0	75.7	77.5	158.0	100.0
Coffee and spice, roasting and grinding.....	9	75	0.1	1,137,180	0.4	218,806	0.2	.....	.....	.....	-5.7	390.2	.....	-22.1	353.2	.....
Paving materials.....	21	642	0.6	1,135,007	0.4	580,263	0.5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lime.....	34	604	0.7	1,095,301	0.4	521,356	0.5	-8.1	71.3	.....	16.2	72.0	.....	-5.8	112.2	.....
Woolen goods.....	12	431	0.4	780,623	0.3	309,788	0.3	-20.5	-16.5	79.3	-20.9	-20.1	90.0	-14.4	-11.8	108.1
Confectionery (ice cream).....	34	137	0.1	760,689	0.3	320,759	0.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boxes and cartons, paper.....	14	499	0.5	726,430	0.3	437,011	0.4	-10.6	1.6	-41.7	75.8	27.5	-48.7	68.1	18.7	-32.0
Glass.....	4	600	0.6	690,420	0.3	432,317	0.4	15.6	11.0	.....	1.2	24.2	.....	0.2	13.4	.....
Grease and tallow, not including lubricating greases.....	5	213	0.2	670,600	0.2	202,086	0.2	59.0	.....	.....	205.0	61.8	.....	210.8	8.3	.....
Butter.....	13	60	0.1	607,640	0.2	131,749	0.1	.....	.....	.....	1,281.8	120.0	.....	1,306.0	125.0	.....
Stoves and ranges.....	5	324	0.3	528,447	0.2	311,661	0.3	-10.7	21.4	.....	-22.7	27.2	.....	-22.4	23.0	.....
All other industries.....	404	14,469	14.1	40,509,000	15.3	14,828,350	13.6	.....	.....	.....	.....	.....	.....	.....	.....	.....

1 Percentages are based on figures in Table 33; a minus sign (-) denotes decrease; percentages are omitted where base is less than 100, or where comparable figures can not be given.

Separate statistics are presented for 44 industries, or industry groups, for each of which products valued at more than \$500,000 were reported in 1914. These industries include 7 with products exceeding \$10,000,000 in value, 4 with products between \$5,000,000 and \$10,000,000, 25 with products between \$1,000,000 and \$5,000,000, and 8 with products valued at less than \$1,000,000. Among those included under "all other industries," the statistics for which can not be shown separately without the possibility of disclosing the operations of individual establishments, are a number having products exceeding in value some for which figures are given in the table.<sup>1</sup>

The industries in this table are arranged in the order of their importance by value of products, but the arrangement would vary considerably if based on average number of wage earners or value added by manufacture. The lumber and timber industry, however, ranks first in all three items. Tobacco manufactures ranked second in value of products and value added by manufacture, but fourth in number of wage earners. Cars and general shop construction and repairs by steam-railroad companies ranked third in value of products and value added by manufacture but second in number of wage earners. The flour-mill and gristmill industry ranked fourth in value of products, twenty-first in number of wage earners, and eighth in value added by manufacture. Machinery is used largely in this industry and comparatively few employees are required, therefore the proportional value added to the raw material by manufacture is small in comparison with the corresponding proportions for most other industries. Fertilizers ranked fifth in value of products and sixth in number of wage earners and value added by manufacture.

In rank according to value of products, there were few changes in 1914 as compared with 1909. Lumber and timber and tobacco manufactures held the same rank at both censuses. Cars and general shop construction and repairs by steam-railroad companies, which ranked fourth in 1909, held third place in 1914, while flour-mill and gristmill products ranked third in 1909 and fourth in 1914. Leather, tanned, curried, and finished, dropped from fifth place in 1909 to eighth in 1914; whereas fertilizers; peanuts, grading, roasting, cleaning, and shelling; and cotton goods advanced from sixth, seventh, and eighth places in 1909 to fifth, sixth, and seventh places, respectively, in 1914.

*Lumber and timber products.*—Under this head are included statistics for logging and sawmill operations,

planing mills, and factories manufacturing wooden packing boxes, and window and door screens. This industry was first in importance in the state in 1914, although as compared with 1909, it shows a decrease in all items. It gave employment during the year 1914 to an average of 26,307 wage earners, had products valued at \$32,449,063, and the value added by manufacture amounted to \$19,083,983. These figures represent 25.6 per cent, 12.3 per cent, and 17.6 per cent of the respective totals reported for all manufacturing industries of the state. The statistics in this table do not cover mills engaged exclusively in custom sawing for local consumption.

*Tobacco manufactures.*—The statistics presented for this industry include the manufacture of chewing and smoking tobacco, and cigars and cigarettes. The industry ranked second in importance in the state in 1914, its products forming 11.4 per cent of the total value of products for the state. Although showing decreases in number of establishments and average number of wage earners during the three census periods, increases are shown in the value of products. A decrease of 28 is shown in the number of establishments for the period 1909–1914; the average number of wage earners decreased 1,574, or 20 per cent; the value of products increased \$4,710,499, or 18.6 per cent; and value added by manufacture, \$3,797,835, or 26.8 per cent.

*Cars and general shop construction and repairs by steam-railroad companies.*—The statistics for this industry represent the work done in the car shops operated by steam-railroad companies. The operations consist principally of repairs to rolling stock and equipment, but include also shopwork done for the track and bridge and building departments. The value of work performed increased \$8,260,555, or 83 per cent. Employment was given to an average of 10,375 wage earners in 1914, the second largest number reported by any of the industries specified in the table. This number represents an increase of 2,787, or 36.7 per cent, as compared with 7,588, the number employed in 1909.

*Flour-mill and gristmill products.*—This industry, which excludes custom mills grinding exclusively for toll or local consumption, ranked third in the state in 1909 as measured by value of products, but dropped to fourth place in 1914. There was an increase of 75 in the number of establishments; the average number of wage earners increased 68, or 6.7 per cent; value of products, \$486,368, or 2.8 per cent; and value added by manufacture, \$261,126, or 10.7 per cent.

*Fertilizers.*—This industry, an important one in Virginia, ranked sixth in value of products in 1909 but was fifth in 1914. The increase in number of establishments from 1909 to 1914 was 12; in average number of wage earners, 514, or 26.3 per cent; in value of products, \$3,315,577, or 41.3 per cent; in value added by manufacture, \$708,766, or 26.8 per

<sup>1</sup> These industries are:  
Bags, other than paper.  
Baking powders and yeast.

Cement.  
Chemicals.  
Flavoring extracts.  
Iron and steel, steel works and rolling mills.  
Liquors, vinous.

Locomotives, not made by railroad companies.  
Oil, cottonseed, and cake.  
Patent medicines and compounds.  
Shipbuilding, including boatbuilding.  
Smelting and refining, copper.  
Sulphuric, nitric, and mixed acids.  
Wood preserving.  
Wooden goods, not elsewhere specified.

cent. The statistics as presented in Table 2 do not fully represent the industry, since fertilizers, valued at \$229,469, reported as subsidiary products by establishments engaged chiefly in the manufacture of other products, are not included. Complete statistics for the industry are presented in Table 28.

*Peanuts, grading, roasting, cleaning, and shelling.*—Although this industry ranked sixth in the state in 1914, Virginia reported 73.2 per cent of the total value of products for the industry in the United States for that year. The number of establishments remained the same as in 1909, the average number of wage earners showed a decrease of seven-tenths of 1 per cent, the value of products increased 38.4 per cent, while value added by manufacture increased 81.3 per cent.

*Textiles.*—This group of industries in Virginia includes the manufacture of cotton goods, hosiery and knit goods, silk goods, including throwsters, and woolen goods. The four allied industries as a whole show an increase of \$3,799,051, or 30.4 per cent, in value of products for the five-year period 1909-1914. There was a decrease of one in the number of establishments reported; the average number of wage earners increased 1,571, or 19.3 per cent; and value added by manufacture, \$1,864,468, or 39.2 per cent. Cotton goods, the most important industry of the group, shows a decrease of one establishment; an increase of 1,253, or 24.8 per cent, in wage earners; \$2,726,532, or 36.4 per cent, in value of products; and \$1,368,254, or 49 per cent, in value added by manufacture. In the hosiery and knit-goods industry increases are shown for all items. An increase of two is shown in number of establishments; 557, or 32.5 per cent, in number of wage earners; \$1,053,129, or 42.8 per cent, in value of products; and \$412,525, or 41.4 per cent, in value added by manufacture. In silk goods, including throwsters, there was an increase of two in the number of establishments; a decrease in average number of wage earners of 128, or 15.6 per cent; value of products increased \$229,208, or 14.8 per cent; and value added by manufacture, \$146,249, or 27.4 per cent. In the woolen-goods industry a decrease has been shown at the two last censuses, the larger decrease being shown for the later period.

*Leather, tanned, curried, and finished.*—The leather industry in Virginia ranked eighth in value of products among the manufacturing industries of the state in 1914, although, in 1909, when the total value of products was much less, it ranked fifth. The number of establishments decreased from 39 in the earlier year to 21 in the latter, many of the smaller establishments having gone out of business. The number of wage earners decreased from 1,590 in 1909 to 1,205 in 1914, or 24.2 per cent, and the total amount of wages paid decreased \$63,695, or 10.8 per cent. While the total value of products increased

\$1,567,589, or 19 per cent, there was a decrease of \$205,288, or 11.3 per cent, in value added by manufacture.

**Persons engaged in manufacturing industries.**—Table 3 shows, for 1914 and 1909, the number of persons engaged in manufactures, distributed by sex, the average number of wage earners being distributed also by age. The sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the "Explanation of terms."

Table 3

CLASS.	Cen- sus year.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.				
		Total.	Male.	Female.	Per cent of total.	
					Male.	Female.
All classes.....	1914	118,109	101,382	16,727	85.8	14.2
	1909	120,797	104,602	16,195	86.6	13.4
Proprietors and officials.....	1914	9,415	9,284	131	98.6	1.4
	1909	9,906	9,783	123	98.8	1.2
Proprietors and firm members.	1914	6,125	6,026	99	98.4	1.6
	1909	6,570	6,469	101	98.5	1.5
Salaried officers of corporations	1914	1,174	1,140	34	97.0	3.0
	1909	1,139	1,128	11	99.0	1.0
Superintendents and managers	1914	2,116	2,109	7	99.7	0.3
	1909	2,197	2,180	17	99.5	0.5
Clerks and other subordinate salaried employees.	1914	5,874	4,744	1,130	84.8	15.2
	1909	5,215	4,333	882	83.1	16.9
Wage earners (average number)...	1914	102,820	87,354	15,466	85.0	15.0
	1909	105,676	90,510	15,166	85.7	14.3
16 years of age and over.....	1914	100,209	85,674	14,535	85.5	14.5
	1909	102,651	88,191	14,460	86.4	13.6
Under 16 years of age.....	1914	2,611	1,080	1,531	41.3	58.7
	1909	3,622	2,355	1,267	65.0	35.0

The total number of persons engaged in manufacturing industries for the year 1914 was 118,109, of whom 102,820, or 87.1 per cent, were wage earners, 9,415, or 8 per cent, were proprietors and officials, and 5,874, or 5 per cent, were clerks and other subordinate salaried employees. Of the wage earners 16 years of age and over, 85,674, or 85.5 per cent, were males, and 14,535, or 14.5 per cent, were females. Figures for individual industries will be found in Table 34.

Table 4 gives, for the several classes of persons engaged in manufactures, the percentages of increase from 1909 to 1914 and the per cent distribution at the two censuses.

Clerks and other subordinate salaried employees increased 12.6 per cent in the period 1909-1914 and salaried officers of corporations 3.1 per cent. All other classes engaged in manufactures show a decrease. For wage earners 16 years of age and over, which represented 84.8 per cent of the total in 1914 and 84.5 per cent in 1909, a small decrease is shown, 1.8 per cent, during the five-year period. The largest decrease for both sexes is 27.9 per cent for wage earners under 16 years of age, but the proportion which this class formed of the total was only 2.2 per cent in 1914 and 3 per cent in 1909.

Table 4

Table 4	CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
		Per cent of increase, <sup>1</sup> 1909-1914.			Per cent distribution.					
		Total.	Male.	Female.	Total.		Male.		Female.	
					1914	1909	1914	1909	1914	1909
All classes.....	-2.2	-3.1	3.7	100.0	100.0	100.0	100.0	100.0	100.0	
Proprietors and officials.....	-5.0	-5.1	6.5	8.0	8.2	9.2	9.3	0.8	0.8	
Proprietors and firm members.....	-6.8	-6.8	-2.0	5.2	5.4	5.9	6.2	0.6	0.6	
Salaried officers of corporations.....	3.1	1.9	.....	1.0	0.9	1.1	1.1	0.1	0.1	
Superintendents and managers.....	-3.7	-3.5	.....	1.8	1.8	2.1	2.1	0.1	0.1	
Clerks and other subordinate salaried employees.....	12.6	9.5	28.1	5.0	4.3	4.7	4.1	6.8	5.5	
Wage earners (average number).....	-2.7	-3.5	2.2	87.1	87.5	86.2	86.5	92.5	93.8	
16 years of age and over.....	-1.8	-2.9	4.8	84.8	84.5	84.5	84.3	86.9	85.9	
Under 16 years of age.....	-27.9	-28.7	-26.5	2.2	3.0	1.7	2.2	5.6	7.9	

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.

In order to compare the distribution of persons engaged in manufactures in 1914 with that shown at the census of 1904 it is necessary to use the classification employed at the earlier census. (See "Explanation of terms.") Table 5 makes this comparison according to occupational status.

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
	Number.			Per cent distribution.			Per cent of increase. <sup>1</sup>		
	1914	1909	1904	1914	1909	1904	1909-1914	1904-1909	
Total.....	118,109	120,797	88,898	100.0	100.0	100.0	-2.2	35.9	
Proprietors and firm members.....	6,125	6,570	3,643	5.2	5.4	4.1	-6.8	80.3	
Salaried employees.....	9,164	8,551	4,970	7.8	7.1	5.6	7.2	72.1	
Wage earners (average).....	102,820	105,676	80,285	87.0	87.5	90.3	-2.7	31.6	

<sup>1</sup> A minus sign (-) denotes decrease.

Each of the classes given in this table shows an increase for the decade 1904-1914, but only one, salaried employees, shows an increase in the five-year period 1909-1914. The decrease of 6.8 per cent in number of proprietors and firm members for the period 1909-1914 is due primarily to a decrease in the number of establishments engaged in the manufacture of lumber and timber products.

The average number of wage earners employed and their per cent distribution as males 16 years of age and over, females 16 years of age and over, and children under 16 years of age is given in Table 6, for 1914, 1909, and 1904. The table also shows, for some of the important industries separately, a similar distribution of wage earners for 1914 and 1909.

For all industries combined, the proportion of male wage earners 16 years of age and over was greater for 1909, there being a slight decrease for 1914, the proportion of females decreased during the decade but increased somewhat during the five-year period 1909-1914. The actual number of females employed, however, has increased from census to census. The proportion of children under 16 years of age employed as wage earners shows a decrease at each census,

although this class increased in actual number between 1904 and 1909.

Table 6

INDUSTRY.	Census year.	WAGE EARNERS.			
		Average number. <sup>1</sup>	Per cent of total.		
			16 years of age and over.		Under 16 years of age.
			Male.	Female.	
All industries.....	1914	102,820	83.3	14.1	2.5
	1909	105,676	83.5	13.1	3.4
	1904	80,285	81.0	14.9	4.0
Boots and shoes.....	1914	1,555	62.6	33.0	4.3
	1909	2,711	73.6	21.8	4.6
Bread and other bakery products.....	1914	1,033	86.4	12.1	1.5
	1909	870	84.6	11.4	4.0
Brick, tile, and other clay products.....	1914	1,063	97.7	.....	2.3
	1909	2,090	97.3	0.5	2.2
Canning and preserving.....	1914	2,169	34.6	50.7	14.7
	1909	1,800	29.1	49.2	21.7
Carriages and wagons and materials.....	1914	1,245	99.1	0.4	0.6
	1909	1,329	98.0	0.5	1.4
Cars and general shop construction and repairs by steam-railroad companies.....	1914	10,375	99.9	0.1	.....
	1909	7,588	99.9	0.1	(?)
Clothing, men's, including shirts.....	1914	1,282	11.7	86.9	1.4
	1909	1,160	11.0	85.0	3.4
Coke, not including gas-house coke.....	1914	852	100.0	.....	.....
	1909	1,425	99.6	.....	0.4
Cooperage.....	1914	1,390	88.8	8.4	2.8
	1909	788	73.0	24.6	2.4
Copper, tin, and sheet-iron products.....	1914	528	83.0	13.2	3.8
	1909	818	80.0	13.2	6.8
Cotton goods.....	1914	6,310	65.0	30.6	4.4
	1909	5,057	57.1	29.5	13.4
Fertilizers.....	1914	2,470	99.9	.....	0.1
	1909	1,956	99.5	0.3	0.2
Flour-mill and gristmill products.....	1914	1,082	99.7	0.2	1.0
	1909	1,014	98.6	0.1	1.3
Foundry and machine-shop products.....	1914	2,444	99.8	0.1	0.1
	1909	2,798	99.0	(?)	1.0
Furniture.....	1914	1,221	93.1	0.3	6.6
	1909	990	90.9	0.5	8.6
Gas, illuminating and heating.....	1914	533	100.0	.....	.....
	1909	878	99.7	.....	0.3
Glass.....	1914	606	92.4	3.3	4.3
	1909	524	90.7	0.6	8.8
Hosiery and knit goods.....	1914	2,272	34.8	53.9	11.3
	1909	1,715	32.8	54.2	12.9
Ice, manufactured.....	1914	714	97.6	.....	2.4
	1909	475	97.1	.....	2.9

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number for all industries combined, see "Explanation of terms."

<sup>2</sup> Less than one-tenth of 1 per cent.

Table 6—Continued.

INDUSTRY.	Census year.	WAGE EARNERS.			
		Average number.	Per cent of total.		Under 16 years of age.
			16 years of age and over.		
			Male.	Female.	
Iron and steel, blast furnaces.....	1914 1909	689 1,320	98.7 99.1	..... .....	0.3 0.9
Leather goods.....	1914 1909	1,428 1,487	88.3 90.0	4.1 6.7	7.0 2.4
Leather, tanned, curried, and finished.....	1914 1909	1,205 1,590	96.8 97.0	3.1 1.9	0.2 0.4
Lime.....	1914 1909	694 710	100.0 100.0	..... .....	..... .....
Lumber and timber products.....	1914 1909	26,307 33,287	97.2 98.0	1.3 0.5	1.5 1.5
Marble and stone work.....	1914 1909	1,260 1,585	95.6 99.4	..... .....	4.4 0.6
Paper and wood pulp.....	1914 1909	1,260 912	92.5 89.0	7.5 10.1	..... 0.3
Peanuts, grading, roasting, cleaning, and shelling.....	1914 1909	1,505 1,516	21.1 21.0	76.8 76.8	2.1 2.2
Printing and publishing.....	1914 1909	2,790 2,555	72.1 72.0	24.7 22.7	3.2 4.7
Silk goods, including throwsters.....	1914 1909	601 810	30.8 38.8	51.5 47.0	17.7 13.0
Tobacco manufactures.....	1914 1909	6,308 7,882	34.2 39.4	61.1 54.5	4.7 6.1
All other industries.....	1914 1909	18,938 16,461	90.5 86.9	7.5 10.4	2.0 2.7

Of the 30 industries for which separate statistics are given in this table, 20 show an increased proportion of males in 1914 as compared with 1909, and 13 an increased proportion of females, while but 5 show an increase in the proportion of children under 16 years of age. Four industries which in 1909 gave employment to children under 16 years of age reported no employees of this class for 1914.

In the manufacture of men's clothing in 1914, about seven-eighths of the wage earners 16 years of age and over were women; in the roasting, cleaning, shelling, and grading of peanuts; canning and preserving; tobacco; and the textile industries, although the proportion was smaller, the females also outnumbered the males. The industries reporting the greatest number of children in 1914 are leather goods, canning and preserving, hosiery and knit goods, and silk goods, including throwsters.

Table 7 shows the average number and the per cent distribution of wage earners employed in each of the cities having more than 10,000 inhabitants, exclusive of Newport News, classified according to age periods, and in the case of those 16 years of age and over, according to sex, for 1914, 1909, and 1904.

Table 8 gives percentages of increase from census to census, based on the figures in Table 7.

Table 7

SEX AND AGE.	Census year.	AVERAGE NUMBER OF WAGE EARNERS IN 1—								
		Alexan- dria.	Danville.	Lynch- burg.	Norfolk.	Peters- burg.	Port- smouth.	Richmond.	Roanoke.	Staun- ton.
Total.....	1914 1909 1904	1,564 1,470 1,291	2,001 3,070 3,038	3,474 4,026 2,534	5,000 4,749 2,035	3,903 3,887 3,288	707 842 651	17,282 14,810 12,444	5,496 3,544 3,089	346 339 .....
16 years of age and over:										
Male.....	1914 1909 1904	1,390 1,331 1,202	1,751 1,712 1,759	2,373 2,801 1,759	4,581 3,518 2,022	2,248 2,434 1,984	582 678 430	12,728 10,010 8,616	5,214 3,312 2,934	235 216 .....
Female.....	1914 1909 1904	82 69 53	840 1,086 1,091	995 968 651	1,258 1,073 740	1,439 1,271 1,053	165 130 73	4,171 4,638 3,704	246 201 110	93 113 .....
Under 16 years of age.....	1914 1909 1904	32 70 36	100 278 377	106 257 124	61 158 167	217 182 251	20 34 48	383 301 225	6 31 45	18 16 .....
Per cent of total:										
16 years of age and over—										
Male.....	1914 1909 1904	92.4 90.5 93.1	85.1 55.7 51.4	68.3 69.6 69.4	77.6 74.1 68.9	57.6 62.6 60.3	75.9 80.5 78.0	73.6 67.4 68.4	95.4 93.4 95.0	67.1 63.7 .....
Female.....	1914 1909 1904	5.5 4.7 4.1	31.2 35.3 36.1	28.7 21.0 25.7	21.3 22.6 25.4	36.8 32.7 32.0	20.3 15.4 13.2	24.1 30.6 29.8	4.5 5.7 3.6	26.9 33.8 .....
Under 16 years of age.....	1914 1909 1904	2.1 4.8 2.8	3.7 9.0 12.5	3.0 6.4 4.9	1.0 3.3 5.7	5.6 4.7 7.6	3.8 4.0 8.7	2.2 2.0 1.8	0.1 0.0 1.4	5.9 3.0 .....

<sup>1</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

<sup>2</sup> Figures do not agree with those published, because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

The proportion of male wage earners 16 years of age and over is greatly in excess of that for females in every city, the only city in 1914 in which the proportion of adult males fell below 65 per cent being Petersburg. The proportions for all cities combined were for males 75.3, females 22.4, and children 2.3. All of the cities

for which figures are given for the decade show decreases in the number and proportions of children under 16 years of age, with the exception of Richmond, which shows an increase at each census. All, except Petersburg, Richmond, and Staunton, show decreases in number of children for the period 1909-1914.

Table 8

CITY. <sup>1</sup>	PER CENT OF INCREASE <sup>2</sup> IN AVERAGE NUMBER OF WAGE EARNERS.				
	Period.	Total.	16 years of age and over.		Under 16 years of age.
			Male.	Female.	
Alexandria.....	1904-1914	18.5	15.0	.....	.....
	1909-1914	2.3	4.4	.....	.....
	1904-1909	13.9	10.7	.....	.....
Danville.....	1904-1914	-10.8	13.0	-23.0	-73.5
	1909-1914	-12.5	2.3	-22.7	-61.0
	1904-1909	1.9	16.5	-0.5	-26.3
Lynchburg.....	1904-1914	37.1	34.9	52.8	-14.5
	1909-1914	-13.7	-15.3	2.8	-58.8
	1904-1909	53.9	59.2	48.7	107.3
Norfolk.....	1904-1914	101.0	126.6	68.6	-63.5
	1909-1914	24.2	30.2	17.2	-61.4
	1904-1909	61.8	74.0	43.8	-5.4
Petersburg.....	1904-1914	18.7	13.3	36.0	-13.5
	1909-1914	0.4	-7.6	13.1	19.2
	1904-1909	18.2	22.7	20.7	-27.5
Portsmouth.....	1904-1914	30.2	35.3	.....	.....
	1909-1914	-8.0	-14.2	20.0	.....
	1904-1909	52.8	57.7	.....	.....
Richmond.....	1904-1914	38.0	49.5	12.6	70.2
	1909-1914	16.4	27.2	-8.1	27.2
	1904-1909	19.3	17.6	22.5	33.8
Roanoke.....	1904-1914	77.9	78.7	123.6	.....
	1909-1914	55.1	58.3	22.4	.....
	1904-1909	14.7	12.9	32.7	.....
Staunton.....	1909-1914	2.1	8.8	-17.7	.....

<sup>1</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

<sup>2</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.

The largest percentage of increase in the decade is shown for the males in Norfolk, 126.6 per cent, although the greatest actual increase was for males in Richmond. There is also a large increase, 68.6 per cent, in the number of females reported for Norfolk. Roanoke, in the same period, shows an increase of 78.7 per cent in males and 123.6 per cent in females. The increases for the period 1909-1914 are much smaller.

The wage earners in Richmond, the most important city in the state, increased 38.9 per cent during the period 1904-1914, the males, 49.5 per cent; females, 12.6 per cent; and children, 70.2 per cent. Nearly half of these children were employed in the manufacture of tobacco.

**Wage earners employed, by months.**—The following table gives, for all industries combined, the total number of wage earners employed on the 15th of each month, or the nearest representative day, for 1914 and 1909, and the average number employed during each month in 1904, together with the percentage which the number reported for each month forms of the greatest number reported for any month.

For 1914 the greatest activity in the combined industries of the state is shown for the spring and fall months, the maximum number of wage earners appearing for September, as in 1909 and 1904, and the minimum for December. In the earlier years, however, the greatest activity is shown during the fall months. The greatest difference between the maxi-

mum and minimum months in any one of the three census years was 21,113 in 1909, the corresponding figures for 1914 and 1904 being 15,068 and 13,994, respectively. The variation in the number employed was slightly greater in 1909 than in 1914, amounting to 18.2 per cent in the earlier year, as against 13.9 per cent in the later. The corresponding percentage for 1904 was 16.1 per cent.

Table 9

MONTH.	WAGE EARNERS IN MANUFACTURING INDUSTRIES.					
	Number. <sup>1</sup>			Per cent of maximum.		
	1914	1909	1904	1914	1909	1904
January.....	100,795	94,885	72,754	92.8	81.8	83.0
February.....	101,063	97,714	73,761	93.1	84.2	85.0
March.....	103,802	101,750	77,565	95.6	87.7	89.4
April.....	106,175	104,393	80,108	97.8	90.0	92.3
May.....	105,002	104,865	81,834	97.5	90.4	94.3
June.....	104,016	105,036	82,658	96.6	90.5	95.3
July.....	102,697	104,231	81,019	94.6	89.0	93.4
August.....	103,418	110,650	84,232	95.2	95.4	97.1
September.....	108,500	115,093	86,748	100.0	100.0	100.0
October.....	106,016	112,376	84,620	97.6	96.8	97.5
November.....	90,944	109,216	80,771	89.3	94.2	93.1
December.....	93,522	107,092	77,360	86.1	92.3	89.2

<sup>1</sup> The figures for 1914 and 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during the month.

Table 10 gives the total average number of wage earners employed during 1914, together with the total number employed on the 15th of each month, or the nearest representative day, for the combined industries of the state, for a number of selected industries, and for the total industries of each of the nine cities having more than 10,000 inhabitants. As previously stated, statistics of Newport News are not shown separately in any table.

Among the selected industries a wide fluctuation between the maximum and minimum number of wage earners is shown. Canning and preserving, being a seasonable industry, shows the greatest fluctuation, the number of wage earners in the minimum month, January, being but 2.4 per cent of the number in September, the maximum month. A great fluctuation also appears for the glass industry, the number of wage earners for August, the minimum month, being 10 per cent of the maximum month, April. The custom of closing down for repairs during the hot months of July and August explains the great fluctuation in this industry. The greatest stability of employment is shown for printing and publishing, in which industry the minimum formed 97.3 per cent of the maximum. Other industries showing but slight fluctuation are cars and general shop construction and repairs by steam-railroad companies, bread and other bakery products, and flour-mill and gristmill products, in which industries the minimum formed of the maximum 94.7, 93.3, and 92.7 per cent, respectively. Of the cities, Alexandria and Staunton show the greatest fluctuation, the proportions that the minimum formed of the maximum in these cities being 78.8 per cent and 72.2 per cent, respectively.



Table 10

WAGE EARNERS: 1914.  
[Month of maximum employment for each industry is indicated by boldface figures and that of minimum by *italic* figures.]

INDUSTRY AND CITY.	Average number employed during year.	Number employed on 15th day of the month or nearest representative day.												Per cent minimum is of maximum. <sup>1</sup>
		Jan-uary.	Feb-ruary.	March.	April.	May.	June.	July.	August.	Sep-tem-ber.	Octo-ber.	Novem-ber.	Decem-ber.	
All Industries.....	102,320	100,705	101,003	103,802	100,175	105,902	104,010	102,007	103,418	108,590	100,010	90,914	93,522	86.1
Boots and shoes.....	1,555	1,730	1,627	1,577	1,482	1,567	1,650	1,610	1,705	1,583	1,500	1,477	1,440	85.9
Bread and other bakery products.....	1,033	1,001	990	1,008	1,038	1,053	1,067	1,052	1,040	1,050	1,034	1,021	1,027	93.3
Brick, tile, and other clay products.....	1,003	1,004	901	1,145	1,765	2,173	2,204	2,288	2,248	1,005	1,693	1,225	1,165	39.3
Canning and preserving.....	2,100	210	220	304	777	607	625	928	5,454	9,062	6,443	957	433	2.4
Carriages and wagons and materials..	1,210	1,287	1,285	1,330	1,355	1,320	1,437	1,300	1,207	1,182	1,085	974	905	67.8
Cars and general shop construction and repairs by steam-railroad companies.....	10,375	10,501	10,492	10,613	10,321	10,418	10,102	10,531	10,050	10,438	10,610	10,287	10,137	94.7
Clothing, men's, including shirts.....	1,282	1,385	1,451	1,555	1,538	1,480	1,310	1,233	1,300	977	1,040	1,002	1,027	62.8
Coke, not including gas-house coke....	1,852	1,057	1,090	985	907	904	853	802	752	693	693	750	702	69.3
Cooperage.....	1,390	1,235	1,287	1,441	1,544	1,783	1,786	1,421	823	1,277	1,462	1,307	1,315	46.0
Copper, tin, and sheet-iron products..	528	590	424	405	510	570	501	541	570	648	500	480	500	61.1
Cotton goods.....	6,310	6,105	6,100	6,184	6,270	6,321	6,357	6,309	5,857	6,375	6,512	6,563	6,713	87.2
Fertilizers.....	2,470	1,020	1,071	2,250	3,246	2,408	2,874	2,913	2,877	2,954	2,772	2,420	1,237	37.8
Flour-mill and gristmill products.....	1,082	1,008	1,065	1,055	1,047	1,080	1,055	1,001	1,118	1,110	1,117	1,103	1,112	92.7
Foundry and machine-shop products..	2,444	2,575	2,451	2,420	2,503	2,634	2,654	2,502	2,487	2,395	2,253	2,157	2,108	81.3
Furniture.....	1,221	1,208	1,200	1,300	1,201	1,250	1,101	1,100	1,234	1,225	1,185	1,164	1,145	88.1
Gas, illuminating and heating.....	533	480	482	400	546	638	680	620	621	502	467	472	480	68.7
Glass.....	906	784	770	783	790	675	695	241	70	604	670	652	650	10.0
Hosiery and knit goods.....	2,272	2,258	2,305	2,354	2,361	2,253	2,314	2,200	2,150	2,178	2,336	2,198	2,237	91.1
Ice, manufactured.....	714	608	604	548	632	708	918	1,020	940	803	723	655	620	49.2
Iron and steel, blast furnaces.....	680	824	825	844	821	842	820	700	772	606	395	371	380	44.0
Leather goods.....	1,428	1,464	1,487	1,404	1,481	1,466	1,483	1,450	1,438	1,422	1,370	1,310	1,250	84.0
Leather, tanned, curried, and finished.	1,205	1,100	1,107	1,108	1,213	1,225	1,317	1,295	1,207	1,164	1,137	1,140	1,115	81.7
Lime.....	694	653	671	755	827	784	715	704	605	737	633	607	647	60.1
Lumber and timber products.....	26,907	25,088	26,011	27,888	28,920	28,730	27,700	26,305	24,632	25,311	26,020	24,883	23,600	81.3
Marble and stone work.....	1,200	1,138	1,093	1,150	1,108	1,205	1,323	1,334	1,372	1,357	1,317	1,230	1,253	79.7
Paper and wood pulp.....	1,390	1,351	1,327	1,224	1,227	1,214	1,228	1,233	1,272	1,297	1,201	1,245	1,241	89.8
Peanuts, grading, roasting, cleaning, and shelling.....	1,505	1,708	1,754	1,812	1,762	1,673	1,236	1,214	1,301	1,200	1,110	1,501	1,071	61.8
Printing and publishing.....	2,700	2,785	2,780	2,810	2,810	2,780	2,764	2,762	2,701	2,770	2,810	2,828	2,707	97.3
Silk goods, including throwsters.....	901	603	688	713	706	788	805	800	721	605	600	605	672	70.2
Tobacco manufactures.....	6,308	6,520	6,683	6,660	6,550	6,445	6,450	6,285	6,031	6,107	6,104	5,938	5,875	88.1
All other industries.....	18,038	20,358	19,950	19,430	18,018	18,020	18,050	18,435	18,571	18,744	18,900	19,390	18,400	90.4
Total for cities.....	41,903	42,015	42,470	42,714	42,230	42,308	41,050	40,337	39,120	40,463	41,478	40,578	40,057	93.8
ALEXANDRIA.....	1,504	1,034	1,600	1,028	1,644	1,600	1,591	1,315	1,290	1,630	1,387	1,301	1,302	78.8
DANVILLE.....	2,691	2,570	2,581	2,604	2,688	2,700	2,751	2,780	2,753	2,733	2,712	2,722	2,700	93.4
LYNCHBURG.....	3,474	3,500	3,570	3,546	3,560	3,635	3,631	3,351	3,155	3,400	3,641	3,472	3,162	80.8
NORFOLK.....	6,000	6,722	6,817	6,003	6,210	6,466	6,246	6,742	6,520	6,635	6,000	5,710	5,710	83.0
PETERSBURG.....	3,903	3,921	4,114	4,180	4,141	4,000	4,023	3,845	3,072	3,704	3,700	3,744	3,653	86.9
PORTSMOUTH.....	767	600	710	768	818	850	825	868	760	720	730	730	727	79.5
RICHMOND.....	17,282	18,536	18,100	17,013	17,227	16,027	16,831	16,535	16,572	16,744	17,593	17,135	17,342	88.0
ROANOKE.....	6,406	5,500	5,647	5,655	5,580	5,752	5,008	5,631	5,451	5,304	5,403	5,253	5,110	88.5
STAUNTON.....	346	338	341	334	305	381	363	300	350	377	347	321	275	72.2

<sup>1</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

**Prevailing hours of labor.**—In Table 11 the average number of wage earners reported for 1914 and 1909, for all industries combined and for selected industries throughout the state, have been classified according to the number of hours of labor per week prevailing in the establishments in which they were employed. A similar classification is given for 1914 only for all industries combined in each city having more than 10,000 inhabitants, with the exception of Newport News. The number employed in each establishment is classified as a total, even though a few employes worked a greater or a smaller number of hours.

The figures in this table, for the state as a whole, emphasize the tendency toward a shorter working day for wage earners. In 1909 the proportion of wage earners employed in establishments where the prevailing hours of work were under 60 per week was 33.8 per cent of the total number of wage earners; the proportion of those in establishments having working hours of 60 and over per week was 66.2 per cent. The

corresponding proportions for 1914 were 45.2 and 54.8 per cent, respectively. During the five-year period there was a marked increase in the proportion in each of the four classes working fewer than 60 hours per week.

Among the separate industries, boots and shoes shows the most pronounced decrease in hours of labor. In 1909, only 18.6 per cent of the wage earners in this industry were employed in establishments where the hours of labor were fewer than 60 per week, but in 1914 the proportion thus employed had increased to 97.5 per cent. Paper and wood pulp was the only industry among those presented in this table showing a large proportion of the employees in establishments where the hours of labor were 72 per week.

For the cities, taken as a group, 38,961, or 94.2 per cent, of the total average number of wage earners reported for 1914, were in establishments where the prevailing hours were 60 or fewer per week, while only 2,402 were in establishments in which the hours were more than 60 per week.



Table 11

INDUSTRY AND CITY.		Census year.	AVERAGE NUMBER OF WAGE EARNERS.								
			Total.	In establishments where the prevailing hours of labor per week were—							
				48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....		1914	102,820	7,205	10,569	8,495	20,172	45,181	8,070	1,746	1,382
		1909	105,676	5,415	4,752	6,607	18,934	55,820	9,473	1,208	3,407
Boots and shoes.....		1914	1,555				1,516	39			
		1909	2,711				503	2,208			
Bread and other bakery products.....		1914	1,033	82	8	105	181	537	46	23	1
		1909	870	108	31	107	6	495	57	49	17
Brick, tile, and other clay products.....		1914	1,663	159	82	205	184	1,016	17		
		1909	2,090	187	60	49	195	1,633	16		
Canning and preserving.....		1914	2,169	470	126	65	488	937	27	5	1
		1909	1,860	80	82	34	43	1,542	19	36	24
Carriages and wagons and materials.....		1914	1,246	33	209	206	283	515			
		1909	1,329	8	7	343	168	788	9	11	
Cars and general shop construction and repairs by steam-railroad companies.....		1914	10,375	1,998	5,035	617	222	461	2,042		
		1909	7,588	1,719	823	848	2,198	308	311		1,381
Clothing, men's, including shirts.....		1914	1,282	437	278	176	254	137			
		1909	1,100	288	45	10	680	137			
Coke, not including gas-house coke.....		1914	852					528	8		316
		1909	1,425	4	306		33	766			316
Cooperage.....		1914	1,390	11	33	39	186	1,121			
		1909	788	80	74		67	613	1	3	
Copper, tin, and sheet-iron products.....		1914	528	56	11	65	337	59			
		1909	818	108	3	83	25	599			
Cotton goods.....		1914	6,310				60	6,250			
		1909	5,057					5,057			
Fertilizers.....		1914	2,470	33	2	88	124	1,527	359	337	
		1909	1,956	4	3	14	108	1,465	255	107	
Flour-mill and gristmill products.....		1914	1,082	53	3	5	63	730	34	188	6
		1909	1,014	83	12	18	13	510	71	300	7
Foundry and machine-shop products.....		1914	2,444	32	23	379	586	1,424			
		1909	2,798	3	35	581	583	1,595	1		
Furniture.....		1914	1,221	51	30	151	173	816			
		1909	990	7		73	90	820			
Gas, illuminating and heating.....		1914	533	2			33	60	132		297
		1909	378	2				3	39		334
Glass.....		1914	606	163	343	100					
		1909	524		465	50					
Hosiery and knit goods.....		1914	2,272			172	1,778	308	14		
		1909	1,715				1,241	474			
Ice, manufactured.....		1914	714	2			16	150	108	39	399
		1909	475			1	3	59	47	147	218
Iron and steel, blast furnaces.....		1914	689						470		219
		1909	1,320				73		145	50	1,052
Leather goods.....		1914	1,428	44		250	383	751			
		1909	1,487	188	5	218	50	1,026			
Leather, tanned, curried, and finished.....		1914	1,205	20			94	1,089		2	
		1909	1,590	1	49	1	31	1,506		2	
Lime.....		1914	694		14	114	5	501	48	12	
		1909	716			23	9	329	229	59	67
Lumber and timber products.....		1914	26,307	1,217	2,203	660	4,680	14,137	3,379	31	
		1909	33,287	888	1,222	969	3,396	20,349	6,295	145	23
Marble and stone work.....		1914	1,260	114	182	139	168	340	317		
		1909	1,585	107	142	144	273	464	454	1	
Paper and wood pulp.....		1914	1,260					286	45	929	
		1909	912				63	655		194	
Peanuts, grading, roasting, cleaning, and shelling.....		1914	1,505	5	193	1	442	864			
		1909	1,516		208	5	295	1,008			
Printing and publishing.....		1914	2,790	1,232	549	812	83	112	2		
		1909	2,555	725	341	1,105	178	197	6	2	
Silk goods, including throwsters.....		1914	601				396	295			
		1909	819				669	150			
Tobacco manufactures.....		1914	6,308	454	276	1,613	2,686	1,329			1
		1909	7,882	498	240	403	5,518	1,222			
All other industries.....		1914	18,938	537	969	2,533	4,801	8,753	1,022	180	143
		1909	16,461	431	599	1,519	2,423	9,842	1,518	102	27
Total for cities <sup>1</sup> .....		1914	41,363	3,371	6,116	6,201	12,210	11,063	1,805	33	564
ALEXANDRIA.....		1914	1,504	172	360	610	3	268	5		80
DANVILLE.....		1914	2,691	24	174	62	616	1,790	25		
LYNCHBURG.....		1914	3,474	215	150	127	1,074	1,187	90	6	25
NORFOLK.....		1914	5,900	310	417	936	1,583	2,248	154		252
PETERSBURG.....		1914	3,903	219	55	134	2,297	1,130	44		24
PORTSMOUTH.....		1914	767	56	21	29		548	27		86
RICHMOND.....		1914	17,282	2,083	1,795	4,081	5,650	3,501	84	14	74
ROANOKE.....		1914	5,496	273	3,079	159	319	271	1,376	13	6
STAUNTON.....		1914	346	19	65	63	68	120			11

<sup>1</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

## MANUFACTURES—VIRGINIA.

Location of establishments.—Table 12 shows, for 1914, 1909, and 1899, the extent to which the manufactures in Virginia were centralized in cities having more than 10,000 inhabitants. Statistics for Newport

News are omitted from the group of cities whose population was estimated to be from 10,000 to 25,000 in 1914, and included in the districts outside of the cities, to avoid a possible disclosure of individual operations.

Table 12

Table 12	Census year.	Aggregate.	CITIES HAVING A POPULATION OF 10,000 OR OVER.								DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 OR OVER. <sup>1</sup>	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.			
			Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.
Number of places.....	1914 1910 1900		9 9 8		3 4 6		5 4 2		1 1			
Population <sup>2</sup> .....	1914 1910 1900	2,150,000 2,091,612 1,854,184	403,225 391,718 252,000	18.8 17.5 13.6	46,683 69,080 110,671	2.2 3.3 6.0	221,625 165,010 141,389	10.3 8.0 7.0	134,917 127,628	6.3 6.2	1,746,784 1,699,804 1,602,124	81.2 82.5 86.4
Number of establishments.....	1914 1909 1899	5,508 5,685 3,186	1,080 992 717	19.8 17.4 22.5	137 222 301	2.5 3.9 9.4	480 390 416	8.8 6.9 13.1	466 380	8.5 6.7	4,410 4,693 2,469	80.3 82.6 77.5
Average number of wage earners.....	1914 1909 1899	102,820 105,070 66,223	41,303 30,782 28,142	40.2 34.8 42.5	4,541 8,772 11,790	4.4 8.3 17.8	19,540 13,161 10,353	19.0 12.4 24.7	17,282 14,840	16.8 14.1	61,457 68,804 38,081	59.8 65.2 57.5
Value of products.....	1914 1909 1899	\$204,039,041 210,793,868 108,644,160	\$128,954,107 96,003,688 49,239,897	48.8 44.0 45.3	\$10,666,938 19,927,390 19,877,907	4.0 0.1 18.3	\$55,790,502 20,318,313 29,301,490	21.1 13.3 27.0	\$92,490,667 47,357,985	23.7 21.5	\$135,084,934 123,100,170 59,404,753	51.2 56.0 54.7
Value added by manufacture.....	1914 1909 1899	108,719,465 94,211,171 49,234,666	56,708,038 42,959,778 23,827,644	52.2 45.6 48.3	4,407,431 7,304,058 8,493,083	4.1 7.8 17.2	20,390,342 12,548,970 15,333,001	18.7 13.3 31.1	31,931,865 23,105,850	29.4 24.5	52,010,827 51,251,393 25,457,022	47.8 54.4 51.7

<sup>1</sup> Includes statistics for Newport News, to avoid disclosure of individual operations.

<sup>2</sup> Census estimate of population for 1914.

In accepting the statistics in this table, it will be noted that one of the cities—Staunton—that had a population of 10,000 and over at the census of 1910 and of 1914, was included with those for the outside districts in 1899. Nine cities having an estimated population of 10,000 or more in 1914 show 18.8 per cent of the total estimated population for the state, 19.8 per cent of the number of establishments, 40.2 per cent of the total average number of wage earners, and 48.8 per cent of the total value of products.

The relative importance in manufactures in each of the cities having more than 10,000 inhabitants (exclusive of Newport News), as measured by average number of wage earners and by value of products, in 1914, 1909, and 1904, is shown in Table 13. The cities are listed in the order of their importance as shown by value of products. Comparative figures are not shown for 1904 for Staunton, as its population that year was less than 10,000.

Table 13

CITY. <sup>1</sup>	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1914	1909	1904	1914	1909	1904
Richmond.....	17,282	14,849	12,444	\$62,490,667	\$47,357,085	\$27,744,929
Roanoke.....	5,490	3,544	3,089	16,581,988	7,260,850	5,544,907
Norfolk.....	5,000	4,749	2,935	14,955,135	10,341,321	5,738,906
Petersburg.....	3,903	3,887	3,288	12,609,943	8,895,552	5,800,574
Lynchburg.....	3,474	4,026	2,534	9,918,779	10,188,130	4,905,435
Danville.....	2,691	3,070	3,018	5,558,431	5,389,430	4,774,818
Alexandria.....	1,604	1,470	1,291	3,690,291	4,419,562	2,186,658
Portsmouth.....	767	842	551	1,730,657	1,527,997	945,439
Staunton.....	346	330	.....	1,448,216	1,222,846	.....

<sup>1</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

With the exception of Alexandria and Lynchburg, every city shows an increase in value of products from 1909 to 1914, while all for which comparative statistics are presented show increases from 1904 to 1909. In Alexandria and Lynchburg the decreases during the later period were quite general; a number of establishments for which reports were secured in 1909 were reported as idle or out of business in 1914. The greatest relative gain in value of products from 1904 to 1914, 199 per cent, was made by Roanoke; Norfolk, Richmond, and Petersburg following, with 160.6, 125.2, and 114.1 per cent, respectively.

Richmond, the most important city in the state, ranked in 1914, among the cities of the United States, fortieth in population, forty-fourth in value of products, and forty-sixth in average number of wage earners. On November 5, 1914, the corporate limits of the city were extended so as to include considerable additional territory. The map on the opposite page shows the territory thus included.

Table 14 gives the totals for the city of Richmond as reported for the census of 1914, the statistics for the establishments in the territory added to the city on November 5, 1914, and the aggregate.

In 1914 the principal industries in Richmond, as measured by value of products, were tobacco manufactures, printing and publishing, slaughtering and meat packing, locomotives, and steam-railroad repair shops; in Roanoke, steam-railroad repair shops, foundry and machine-shop products, and blast furnaces; in Norfolk, lumber and timber products, hosiery and knit

goods, the grading, roasting, cleaning, and shelling of peanuts, and vinous liquors; in Petersburg, tobacco manufactures, the grading, roasting, cleaning, and shelling of peanuts, and leather goods; in Danville, cotton goods, flour-mill and gristmill products, and hosiery and knit goods; in Portsmouth, hosiery and knit goods, fertilizers, and bags, other than paper; in Alexandria, fertilizers, and steam-railroad repair shops; in Lynchburg, boots and shoes, foundry and machine-shop products, and flour-mill and gristmill products; in Staunton, flour-mill and gristmill products.

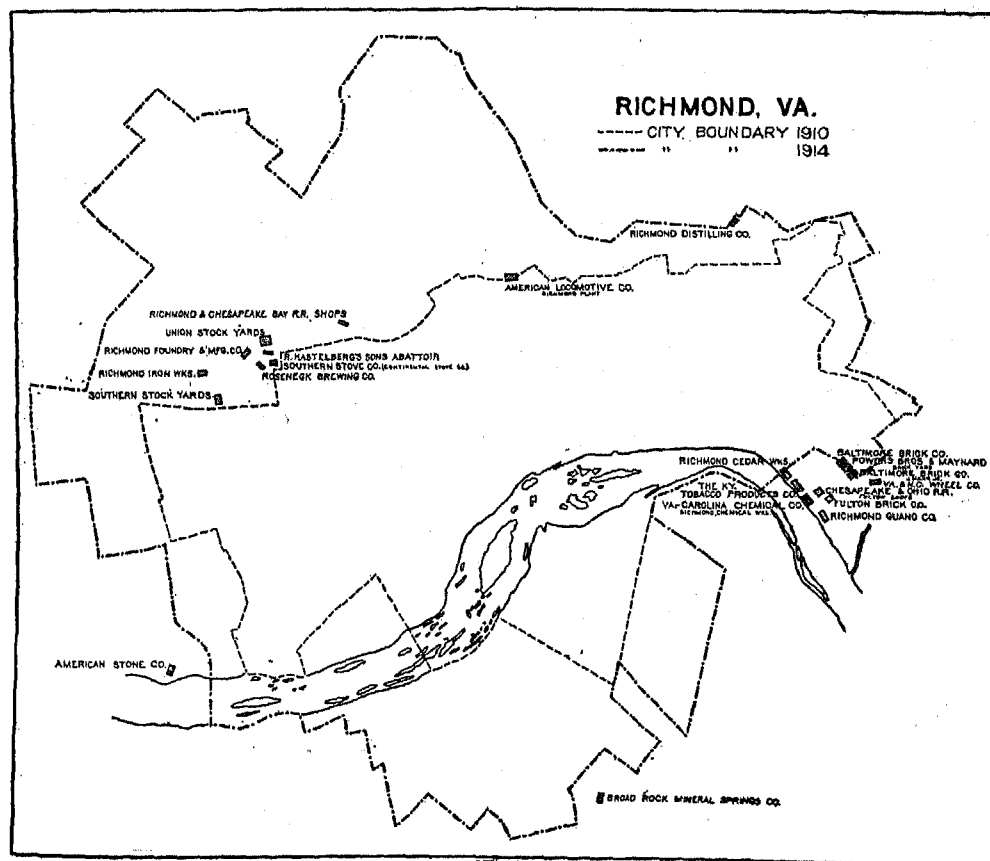
Statistics for Newport News can not be shown separately because of the possibility of disclosing the operations of an important establishment. Ship-building was the leading industry.

Table 14

## MANUFACTURING INDUSTRIES OF RICHMOND.

	Total.	Reported for census of 1914.	For territory annexed Nov. 5, 1914.
Number of establishments.....	472	466	6
Persons engaged.....	21,726	20,533	1,193
Proprietors and firm members.....	357	350	7
Salaried employees.....	3,090	2,901	189
Wage earners (average number).....	18,279	17,282	997
Primary horsepower.....	38,043	33,940	4,103
Capital.....	\$52,870,279	\$48,667,108	\$4,203,171
Salaries and wages.....	13,040,133	12,163,667	876,466
Salaries.....	3,975,837	3,724,065	251,772
Wages.....	9,064,296	8,439,602	624,694
Paid for contract work.....	530,970	530,970	
Rent and taxes (including internal revenue).....	6,627,356	6,526,473	100,883
Cost of materials.....	32,600,671	30,565,802	2,034,869
Value of products.....	65,970,986	62,490,667	3,480,319
Value added by manufacture (value of products less cost of materials).....	33,370,315	31,924,865	1,445,450

MAP SHOWING CORPORATE LIMITS OF RICHMOND, VA.: 1910 AND 1914.



The statistics for that part of Bristol which lies in Virginia are included with those for the outside districts in Table 12. Table 15 presents totals for the entire city and for the parts situated in Virginia and Tennessee, respectively.

In Bristol, Va., the leading industries in order of

importance by value of products were paper and wood pulp; flour-mill and gristmill products; men's clothing; leather, tanned, curried, and finished; and lumber and timber products; while the principal industries in Bristol, Tenn., were flour-mill and gristmill products, men's clothing, and druggists' preparations.

Table 15

	TOTAL.			BRISTOL, VA.			BRISTOL, TENN.		
	1914	1909	Per cent of increase, 1909-1914.	1914	1909	Per cent of increase, 1909-1914.	1914	1909	Per cent of increase, 1909-1914.
Population <sup>2</sup> .....	14,006	13,395	11.3	6,058	6,247	11.4	7,018	7,148	11.2
Number of establishments.....	57	51	.....	31	28	.....	20	23	.....
Persons engaged in manufactures.....	1,385	1,319	5.0	995	942	5.6	390	377	3.4
Proprietors and firm members.....	31	42	.....	19	20	.....	12	22	.....
Salaried employees.....	225	148	52.0	135	80	.....	90	68	.....
Wage earners (average number).....	1,120	1,120	.....	841	842	-0.1	288	287	0.3
Primary horsepower.....	3,051	3,014	-0.7	2,085	2,025	13.7	606	1,280	-48.3
Capital.....	\$2,940,701	\$3,002,409	-4.0	\$2,033,170	\$1,710,738	18.4	\$907,621	\$1,345,671	-32.4
Salaries and wages.....	680,533	631,813	0.1	494,297	471,486	4.8	195,236	160,327	21.8
Salaries.....	239,862	142,741	68.0	141,737	89,126	59.0	98,125	53,615	83.0
Wages.....	449,671	489,072	-8.1	352,560	382,360	-7.8	97,111	106,712	-9.0
Cost of materials.....	2,087,120	1,828,296	14.2	1,045,788	1,234,322	-33.3	441,332	593,974	-25.7
Value of products.....	3,397,426	2,848,777	19.3	2,512,451	1,070,608	20.0	851,575	878,109	-2.7
Value added by manufacture.....	1,310,306	1,020,481	28.4	807,003	739,346	21.8	413,213	284,135	45.4

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.<sup>2</sup> Census estimate of population for 1914.

**Character of Ownership.**—Table 16 presents statistics concerning character of ownership, or legal organization, of manufacturing enterprises. For all industries combined, comparative figures are given for 1914, 1909, and 1904; for selected industries, statistics for 1914 and 1909 are shown; and for indi-

vidual cities, exclusive of Newport News, the figures are for all industries combined and relate only to 1914.

In order to avoid disclosing the operations of individual establishments, it is necessary to omit several important industries from this table.

Table 16

Table 16		Census year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
INDUSTRY AND CITY.						Total.			In establish-ments owned by—			Per cent of total.			Total.			Of establishments owned by—			Per cent of total.		
			Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.						
All industries.....	1914	3,065	1,102	1,281	102,820	10,508	77,015	9,207	10.1	74.0	8.9	\$204,039,041	\$28,657,424	\$212,653,891	\$22,727,726	10.8	80.5	8.6					
	1909	3,061	1,099	1,525	105,676	19,132	72,805	13,679	18.1	69.0	12.9	210,793,858	20,961,088	163,892,508	25,940,262	13.0	74.6	11.8					
	1904	1,500	702	880	80,285	10,323	50,735	10,227	12.9	74.4	12.7	148,856,525	17,767,725	109,540,390	21,542,410	11.9	73.6	14.5					
Bread and other bakery products.	1914	101	18	21	1,033	302	578	93	35.0	56.0	0.0	3,697,270	1,162,252	2,280,138	325,889	31.4	59.8	8.8					
	1909	93	14	28	870	298	415	157	34.3	47.7	18.0	2,790,283	919,806	1,398,544	447,933	33.3	60.0	16.2					
Fertilizers.....	1914	4	51	2	2,470	.....	2,397	1103	.....	95.8	4.2	11,350,120	.....	10,573,747	1770,373	.....	93.2	6.8					
	1909	6	37	2	1,950	.....	1,809	1147	.....	92.5	7.5	8,034,543	.....	7,700,602	1327,941	.....	95.0	4.1					
Flour-mill and gristmill products.	1914	327	58	148	1,082	422	306	354	39.0	28.3	32.7	18,084,413	5,792,390	5,294,450	6,997,597	32.0	29.3	38.7					
	1909	250	60	133	1,014	365	335	314	36.0	33.0	31.0	17,598,045	5,023,130	6,200,823	6,374,083	28.5	35.2	30.2					
Foundry and machine-shop products.	1914	45	41	17	2,444	307	1,900	177	12.0	80.2	7.2	6,000,122	515,700	6,030,619	350,803	7.5	87.5	5.1					
	1909	40	40	24	2,708	273	2,288	237	0.8	81.8	8.5	5,727,014	478,304	4,854,237	394,473	8.4	84.8	6.9					
Leather goods.....	1914	20	14	11	1,428	58	1,318	52	4.1	92.3	3.0	3,463,853	187,133	3,140,803	126,857	5.4	90.9	3.7					
	1909	11	10	10	1,487	84	1,310	84	5.6	88.7	5.0	3,492,051	202,190	3,043,970	245,891	5.8	87.2	7.0					
Lumber and timber products.	1914	1,509	103	540	26,307	0,666	12,382	4,250	36.7	47.1	16.2	32,440,063	0,154,151	18,407,004	4,797,008	28.2	57.0	14.8					
	1909	1,034	100	703	33,287	12,015	14,094	7,178	36.1	42.3	21.0	35,855,310	10,087,384	18,133,870	7,634,056	29.8	50.6	19.6					
Printing and publishing...	1914	219	102	75	2,700	880	1,355	555	31.5	48.0	19.9	7,060,847	1,020,788	4,321,149	1,121,910	23.0	61.1	15.9					
	1909	180	94	89	2,555	734	1,342	479	28.7	52.5	18.7	5,369,738	1,188,704	3,317,349	863,025	22.1	61.8	16.1					
Slaughtering and meat packing.	1914	0	9	0	396	01	203	42	23.0	66.4	10.6	4,362,272	670,000	3,168,804	523,408	15.4	72.6	12.0					
	1909	11	8	5	342	124	185	33	36.3	54.1	9.0	4,600,630	2,444,213	1,729,615	420,802	53.1	37.0	9.3					
Tobacco manufactures.....	1914	42	18	10	6,308	142	6,004	162	2.3	95.2	2.6	30,095,813	317,318	29,505,292	273,203	1.1	98.0	0.9					
	1909	58	27	10	7,882	423	6,900	490	5.4	88.4	6.2	25,385,314	515,165	24,158,270	711,870	2.0	95.2	2.8					
Total for cities <sup>1</sup> .....	1914	418	476	106	41,363	3,389	35,007	2,367	8.2	86.1	5.7	128,954,107	9,174,008	110,850,184	8,023,915	7.1	86.0	6.9					
ALEXANDRIA.....	1914	18	20	11	1,594	56	1,335	113	3.7	88.8	7.5	3,660,201	233,320	3,149,661	277,304	6.4	86.0	7.6					
DANVILLE.....	1914	14	21	8	2,091	93	2,465	133	3.5	91.0	4.9	5,558,431	195,698	5,021,161	341,582	3.5	90.3	6.1					
LYNCHBURG.....	1914	20	38	6	3,474	156	3,229	89	4.5	92.9	2.6	9,018,779	449,400	9,123,578	345,806	4.5	92.0	3.5					
NORFOLK.....	1914	73	90	42	6,900	1,089	4,414	417	18.1	74.8	7.1	14,955,135	2,191,634	11,060,380	1,094,121	14.7	78.0	7.3					
PETERSBURG.....	1914	31	44	12	3,903	258	3,400	185	6.6	88.6	4.7	12,609,043	1,049,427	10,572,027	388,489	13.1	83.8	3.1					
PORTSMOUTH.....	1914	27	9	6	787	529	204	34	69.0	26.0	4.4	1,730,657	953,324	659,740	117,587	55.1	38.1	6.8					
RICHMOND.....	1914	188	197	81	17,282	1,091	15,057	1,134	6.3	87.1	6.0	62,490,007	3,126,181	54,376,802	4,087,684	5.0	87.0	8.0					
ROANOKE.....	1914	20	39	14	5,490	40	5,360	81	0.9	97.6	1.5	16,581,988	156,608	16,112,240	813,140	0.9	97.2	1.9					
STAUNTON.....	1914	21	11	13	340	88	77	181	25.4	22.3	52.3	1,448,210	218,410	1,171,004	1,058,202	15.1	11.8	73.1					

<sup>1</sup> Includes the group "Individuals."<sup>2</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

The most important distinction is that shown between corporate and "all other" forms of ownership.

For all industries combined, the statistics for 1914 show that the establishments under corporate owner-

ship, while representing only 21.1 per cent of the total number of establishments, reported 74.9 per cent of the total average number of wage earners and 80.5 per cent of the total value of products. The corresponding percentages for 1909 were 19.3, 69, and 74.6, respectively; and for 1904, 22, 74.4, and 73.6, respectively.

The forms of ownership prevailing in the individual industries presented in the table vary. The bread and other bakery products, flour-mill and gristmill products, lumber and timber products, and printing and publishing industries are more largely controlled by "individual" and "all other" forms of ownership than are the other industries for which figures are given. This is particularly the case with the flour-mill and gristmill industry, in which 475 out of a total of 533 establishments in 1914, 71.7 per cent of

the total number of wage earners, and 70.7 per cent of the total value of products were "individual" or "all other" forms of ownership.

In Lynchburg, Petersburg, and Roanoke, more than half of the establishments were under corporate ownership. In average number of wage earners and value of products for all cities, except Portsmouth and Staunton, the percentage under corporate ownership was far in excess of the percentage reported for "individual" and "all other" forms combined. In Portsmouth and Staunton, however, the percentages reported by corporations were for wage earners 26.6 and 22.3, respectively; and for value of products, 38.1 and 11.8, respectively.

Size of establishments.—The tendency for manufacturing to become concentrated in large establishments is indicated by the statistics given in Table 17.

Table 17 VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904
All classes.....	5,508	5,685	3,187	102,820	105,670	80,285	\$204,039,041	\$219,793,858	\$148,856,525	\$108,719,465	\$94,211,171	\$65,207,376
Less than \$5,000.....	2,529	2,581	1,109	5,838	7,176	2,374	5,823,235	5,936,118	2,710,015	3,686,067	3,859,930	1,788,004
\$5,000 to \$20,000.....	1,763	1,917	1,192	12,694	15,264	8,996	17,850,020	19,134,920	12,578,958	9,809,703	11,171,420	6,917,700
\$20,000 to \$100,000.....	796	805	603	16,590	19,134	14,992	35,176,305	34,233,401	25,678,424	15,586,860	18,900,075	12,089,249
\$100,000 to \$1,000,000.....	383	356	268	39,113	41,497	36,224	110,115,952	101,364,437	73,817,089	41,903,901	38,289,549	28,505,680
\$1,000,000 and over.....	37	26	15	28,585	22,615	17,609	95,073,529	59,124,982	34,071,439	37,432,874	23,990,197	15,906,743
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	45.9	45.4	34.8	5.7	6.8	3.0	2.2	2.7	1.8	3.4	4.1	2.7
\$5,000 to \$20,000.....	32.0	33.7	37.4	12.3	14.4	11.2	8.8	8.7	8.5	9.0	11.9	10.6
\$20,000 to \$100,000.....	14.5	14.2	18.9	16.1	18.1	18.7	13.3	15.6	17.2	14.6	17.9	18.5
\$100,000 to \$1,000,000.....	7.0	6.3	8.4	38.0	39.3	45.1	41.7	46.1	40.6	38.5	43.6	43.7
\$1,000,000 and over.....	0.6	0.4	0.5	27.8	21.4	22.0	36.0	26.0	22.9	34.4	25.5	24.4

It will be seen from this table that in 1914 only 37, or six-tenths of 1 per cent, of the 5,508 establishments in the state reported products valued at more than \$1,000,000. These establishments, however, employed an average of 28,585 wage earners, or 27.8 per cent of the total for all establishments, and reported 36 per cent of the total value of products, and 34.4 per cent of the total value added by manufacture. On the other hand, the small establishments—those having products valued at less than \$5,000, constituting 45.9 per cent of the total number of establishments—reported only 2.2 per cent of the total value of products. The greatest percentage of the value of products was reported by establishments having products valued at \$100,000 or more.

This table shows that during the five-year period 1909-1914 there was a considerable increase, as measured by both value of products and value added by manufacture, in the relative importance of the largest establishments—those reporting products valued at \$1,000,000 and over.

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Table 18 gives, for 1914 and 1909, for nine of the more important industries, a classification of establishments, wage earners, value of products, and value added by manufacture, similar to that presented in Table 17 for all industries combined.

For 1914, as compared with 1909, this table shows increases in the number of establishments having products under \$5,000 in value for only three of the industries presented—bread and other bakery products, flour-mill and gristmill products, and leather goods. For all industries, the establishments having products valued at \$100,000 and over, except flour-mill and gristmill products, lumber and timber products, and slaughtering and meat packing, show increases in value of products; and for all except flour-mill and gristmill products, leather goods, and lumber and timber products, the establishments in this class show increases in value added by manufacture. In this class flour-mill and gristmill products, foundry and machine-shop products, leather goods, and lumber and timber products show decreases in average number of wage earners.

Table 18

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.				AVERAGE NUMBER OF WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
	1914	1909	Per cent distribution.		1914	1909	Per cent distribution.		1914	1909	Per cent distribution.		1914	1909	Per cent distribution.	
			1914	1909			1914	1909			1914	1909			1914	1909
BREAD AND OTHER BAKERY PRODUCTS.....	140	135	100.0	100.0	1,033	870	100.0	100.0	\$3,097,279	\$2,760,283	100.0	100.0	\$1,500,060	\$1,045,591	100.0	100.0
Less than \$5,000.....	51	48	36.4	35.0	45	58	4.4	6.7	125,050	135,000	3.4	4.9	53,068	55,055	3.6	5.3
\$5,000 to \$20,000.....	54	64	38.6	47.4	182	233	17.6	26.8	530,421	870,531	14.3	24.2	229,508	283,020	15.2	27.2
\$20,000 to \$100,000.....	25	18	17.9	13.3	297	284	28.7	32.6	1,089,998	942,381	29.5	34.1	380,728	304,828	25.8	34.0
\$100,000 to \$1,000,000.....	10	5	7.1	3.7	509	205	49.3	33.0	1,951,201	1,018,302	52.8	36.8	830,000	341,782	55.4	32.7
FERTILIZERS.....	57	45	100.0	100.0	2,470	1,956	100.0	100.0	11,350,120	8,034,543	100.0	100.0	3,354,190	2,645,433	100.0	100.0
Less than \$5,000.....	3	5	5.3	11.1	2	0	0.1	0.3	8,003	13,187	0.1	0.2	3,514	4,490	0.1	0.2
\$5,000 to \$20,000.....	3	8	5.3	6.7	23	9	0.9	0.5	27,140	27,109	0.2	0.3	14,217	8,014	0.4	0.3
\$20,000 to \$100,000.....	24	20	42.1	44.4	531	532	21.5	27.2	1,332,800	1,808,874	11.7	16.3	416,400	585,407	12.1	22.1
\$100,000 and over.....	127	17	47.4	37.8	1,914	1,409	77.5	72.0	9,981,605	6,085,373	87.9	83.2	2,919,990	2,046,598	87.1	77.4
FLOUR-MILL AND GRIST-MILL PRODUCTS.....	533	458	100.0	100.0	1,082	1,014	100.0	100.0	18,084,413	17,508,045	100.0	100.0	2,604,003	2,433,777	100.0	100.0
Less than \$5,000.....	114	70	21.4	16.0	62	40	5.7	4.5	385,121	242,794	2.0	1.4	90,530	43,509	3.4	1.8
\$5,000 to \$20,000.....	254	217	47.7	47.4	273	235	25.2	23.2	2,807,016	2,514,005	15.9	14.3	600,656	440,149	22.3	18.3
\$20,000 to \$100,000.....	131	130	24.0	28.4	373	340	34.5	34.1	5,334,118	5,171,704	29.5	29.4	920,883	813,354	34.2	33.4
\$100,000 and over.....	34	35	6.4	7.0	374	387	34.6	38.2	9,527,558	9,609,302	52.7	54.9	1,082,825	1,130,705	40.2	46.5
FOUNDRY AND MACHINE-SHOP PRODUCTS.....	103	110	100.0	100.0	2,444	2,708	100.0	100.0	9,090,122	5,727,014	100.0	100.0	3,311,435	2,579,000	100.0	100.0
Less than \$5,000.....	32	37	31.1	33.0	45	68	2.0	2.4	73,013	99,032	1.1	1.7	53,348	69,757	1.6	2.3
\$5,000 to \$20,000.....	27	32	26.2	29.1	170	243	7.2	8.7	297,094	369,875	4.3	6.5	192,702	248,215	5.9	9.6
\$20,000 to \$100,000.....	37	31	35.9	28.2	838	861	34.3	30.8	1,508,772	1,240,337	22.7	21.8	835,818	818,765	25.0	31.7
\$100,000 and over.....	7	10	6.8	9.1	1,382	1,020	56.5	58.1	4,055,743	4,011,770	71.0	70.0	2,250,507	1,452,230	67.5	60.3
LEATHER GOODS.....	51	31	100.0	100.0	1,428	1,487	100.0	100.0	3,443,853	3,402,051	100.0	100.0	1,520,797	1,500,907	100.0	100.0
Less than \$5,000.....	20	.....	39.2	.....	21	.....	1.5	.....	46,727	.....	1.3	.....	23,399	.....	1.5	.....
\$5,000 to \$20,000.....	10	15	31.4	48.4	48	54	3.4	3.6	140,518	108,718	4.1	4.8	69,401	85,152	4.6	5.3
\$20,000 to \$100,000.....	8	11	15.7	35.5	174	212	12.2	14.3	428,043	507,455	12.4	14.5	202,049	195,027	13.3	12.3
\$100,000 and over.....	7	5	13.7	16.1	1,185	1,221	83.0	82.1	2,847,065	2,815,878	82.2	80.6	1,225,948	1,310,728	80.6	82.4
LUMBER AND TIMBER PRODUCTS.....	2,218	2,617	100.0	100.0	20,307	33,287	100.0	100.0	32,440,003	35,855,310	100.0	100.0	10,083,983	21,002,011	100.0	100.0
Less than \$5,000.....	1,280	1,301	57.7	53.2	3,744	4,034	14.2	14.8	2,910,101	3,003,574	9.0	8.0	2,211,600	2,317,843	11.6	10.6
\$5,000 to \$20,000.....	712	941	32.1	36.0	7,480	10,308	28.5	31.0	6,862,805	8,755,981	21.1	24.4	4,752,592	6,307,874	24.9	29.1
\$20,000 to \$100,000.....	174	224	7.8	8.6	4,992	6,478	19.0	19.4	7,415,932	8,479,348	22.9	23.7	4,112,050	5,000,803	21.6	21.1
\$100,000 and over.....	53	61	2.3	2.3	10,085	11,569	38.3	34.8	15,200,055	15,520,407	47.0	43.3	8,000,931	8,177,391	42.0	37.2
PRINTING AND PUBLISHING.....	396	309	100.0	100.0	2,790	2,555	100.0	100.0	7,060,844	5,309,738	100.0	100.0	5,003,272	3,964,804	100.0	100.0
Less than \$5,000.....	211	224	53.3	60.7	391	392	12.9	15.3	548,309	562,223	7.8	10.3	433,000	425,552	8.7	10.7
\$5,000 to \$20,000.....	132	95	33.3	25.7	612	580	21.9	22.7	1,125,831	918,171	15.9	17.1	828,444	685,578	16.6	17.3
\$20,000 to \$100,000.....	81	35	7.8	9.5	551	737	19.7	28.8	1,203,893	1,483,015	17.0	27.6	853,020	1,057,831	17.1	26.7
\$100,000 to \$1,000,000.....	22	15	5.6	4.1	1,206	840	43.4	33.1	4,191,811	2,413,420	59.3	45.0	2,887,308	1,795,903	57.7	45.3
SLAUGHTERING AND MEAT PACKING.....	21	24	100.0	100.0	390	342	100.0	100.0	4,302,272	4,000,630	100.0	100.0	636,708	543,477	100.0	100.0
\$5,000 to \$20,000.....	6	8	28.0	33.3	9	11	2.3	3.2	73,252	84,522	1.7	1.8	20,257	20,084	3.2	4.0
\$20,000 to \$100,000.....	8	10	38.1	41.7	32	51	8.1	14.9	372,747	394,000	8.5	7.9	70,724	79,405	12.0	14.6
\$100,000 and over.....	7	6	33.3	25.0	355	280	89.6	81.9	3,916,273	4,151,508	89.8	90.2	539,817	437,388	84.8	80.5
TOBACCO MANUFACTURES.....	78	104	100.0	100.0	6,308	7,882	100.0	100.0	30,095,813	25,385,314	100.0	100.0	17,993,870	14,196,041	100.0	100.0
Less than \$5,000.....	29	45	38.2	43.3	25	60	0.4	0.8	58,057	102,825	0.2	0.4	30,334	60,040	0.2	0.5
\$5,000 to \$20,000.....	26	22	34.2	21.2	141	152	2.2	1.9	249,943	236,707	0.8	0.9	154,034	142,149	0.9	1.0
\$20,000 to \$100,000.....	6	18	7.0	17.3	162	890	2.6	11.3	417,206	989,801	1.4	3.9	271,314	548,197	1.5	3.9
\$100,000 to \$1,000,000.....	10	14	13.2	13.6	1,385	2,440	22.0	31.0	3,401,972	5,724,730	11.3	22.6	1,844,998	2,921,314	10.3	20.6
\$1,000,000 and over.....	5	5	6.6	4.8	4,595	4,334	72.8	55.0	25,909,535	18,331,185	86.3	72.2	15,087,196	10,518,341	87.2	74.1

1 Includes the group "\$1,000,000 and over."

2 Includes the group "less than \$5,000."

Table 19 presents, for 1914, for all industries combined in each of the nine cities having more than 10,000 inhabitants, statistics similar to those given in Table 17 for the state as a whole. Statistics for Newport News are omitted, to avoid disclosure of individual operations. In the cities the same general condition is found as prevails for all industries com-

bined in the state, namely, a preponderance as to number of wage earners, value of products, and value added by manufacture, for establishments having products valued at \$100,000 and over. The highest percentage of total value of products reported by establishments in this class, 91.2, appears for Roanoke, and the lowest, 61.1, is shown for Portsmouth.

Table 19

CITY AND VALUE OF PRODUCT. <sup>1</sup>	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		CITY AND VALUE OF PRODUCT. <sup>1</sup>	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
		Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.			Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.
ALEXANDRIA.....	49	1,504	100.0	\$3,660,291	100.0	\$1,700,442	100.0	PETERSBURG—Con.							
Less than \$5,000.....	11	13	0.9	22,731	0.6	14,967	0.9	\$20,000 to \$100,000.....	29	612	15.7	\$1,279,949	10.2	\$615,199	14.6
\$5,000 to \$20,000.....	18	133	8.8	204,634	5.6	110,600	6.5	\$100,000 and over <sup>2</sup> .....	21	3,163	81.0	11,059,331	87.7	3,457,986	82.0
\$20,000 to \$100,000.....	9	210	14.0	413,195	11.3	190,773	11.6	PORTSMOUTH.....	42	707	100.0	1,730,657	100.0	713,453	100.0
\$100,000 to \$1,000,000.....	11	1,148	76.3	3,019,731	82.5	1,378,102	81.0	Less than \$5,000.....	12	18	2.3	29,715	1.7	16,028	2.2
DANVILLE.....	43	2,691	100.0	5,558,431	100.0	2,346,262	100.0	\$5,000 to \$20,000.....	15	76	9.9	165,704	9.6	88,741	12.4
Less than \$5,000.....	7	7	0.3	13,804	0.2	8,468	0.4	\$20,000 to \$100,000.....	11	252	32.9	478,952	27.6	248,519	34.8
\$5,000 to \$20,000.....	15	97	3.6	190,183	3.6	103,612	4.4	\$100,000 to \$1,000,000.....	4	421	54.9	1,058,226	61.1	340,170	50.5
\$20,000 to \$100,000.....	11	225	8.4	577,755	10.4	318,395	13.6	RICHMOND.....	466	17,282	100.0	62,490,607	100.0	31,931,865	100.0
\$100,000 and over <sup>2</sup> .....	10	2,362	87.8	4,767,080	85.8	1,915,787	81.7	Less than \$5,000.....	123	150	0.9	270,573	0.4	174,456	0.5
LYNCHBURG.....	73	3,474	100.0	9,918,779	100.0	3,407,840	100.0	\$5,000 to \$20,000.....	138	701	4.1	1,500,336	2.4	921,945	2.9
Less than \$5,000.....	15	17	0.5	34,640	0.3	18,422	0.5	\$20,000 to \$100,000.....	112	1,746	10.1	4,698,247	7.5	2,358,299	7.4
\$5,000 to \$20,000.....	14	71	2.1	178,230	1.8	103,332	3.0	\$100,000 to \$1,000,000.....	82	7,275	42.1	22,084,236	35.3	10,800,852	34.0
\$20,000 to \$100,000.....	25	520	15.1	1,208,965	12.2	547,114	16.1	\$1,000,000 and over <sup>2</sup> .....	11	7,410	42.9	33,037,275	51.3	17,613,313	55.2
\$100,000 and over <sup>2</sup> .....	19	2,860	82.3	8,496,944	85.7	2,738,972	80.4	ROANOKE.....	73	5,496	100.0	16,581,988	100.0	5,384,414	100.0
NORFOLK.....	211	5,900	100.0	14,955,135	100.0	6,640,907	100.0	Less than \$5,000.....	16	23	0.4	46,617	0.3	26,480	0.5
Less than \$5,000.....	53	85	1.4	150,750	1.0	102,074	1.5	\$5,000 to \$20,000.....	17	62	1.1	141,045	0.9	85,865	1.6
\$5,000 to \$20,000.....	61	269	4.6	642,078	4.3	378,799	5.7	\$20,000 to \$100,000.....	26	353	6.4	1,273,838	7.7	502,558	9.3
\$20,000 to \$100,000.....	63	1,394	23.6	3,183,756	21.3	1,528,708	23.0	\$100,000 and over <sup>2</sup> .....	14	5,058	92.0	15,120,488	91.2	4,769,511	88.0
\$100,000 and over <sup>2</sup> .....	34	4,152	70.4	10,978,551	73.4	4,637,326	69.8	STAUNTON.....	45	346	100.0	1,448,216	100.0	360,727	100.0
PETERSBURG.....	87	3,903	100.0	12,609,943	100.0	4,216,723	100.0	Less than \$5,000.....	13	15	4.3	35,119	2.4	20,227	5.6
Less than \$5,000.....	16	23	0.6	43,435	0.3	21,202	0.5	\$5,000 to \$20,000.....	22	125	36.1	269,035	18.6	149,673	41.5
\$5,000 to \$20,000.....	21	105	2.7	227,228	1.8	122,330	2.9	\$20,000 to \$100,000.....	10	206	59.5	1,144,062	79.0	190,827	52.9

<sup>1</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.<sup>2</sup> Includes the group "\$100,000 to \$1,000,000."<sup>2</sup> Includes the group "\$1,000,000 and over."

Table 20 shows the size of establishment in 1914 as measured by the number of wage earners employed, for all industries combined, for 30 of the more impor-

tant industries, and for each of the cities having more than 10,000 inhabitants, with the exception of Newport News.

Table 20

INDUSTRY AND CITY.		ESTABLISHMENTS EMPLOYING—																			
		TOTAL.		No wage earners.		1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.		51 to 100 wage earners.		101 to 250 wage earners.		251 to 500 wage earners.		501 to 1,000 wage earners.		Over 1,000 wage earners.	
		Establishments.	Wage earners (average number).	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
All industries.....		5,508	102,820	324	3,120	7,402	1,380	15,071	334	10,528	180	13,187	113	10,719	35	11,904	11	7,555	11	20,364	
Boots and shoes.....		8	1,555	12	93	211	24	261	2	67	3	468	3	1,020	.....	.....	.....	.....	.....	.....	
Bread and other bakery products.....		140	1,033	1	12	36	30	415	8	264	1	75	2	222	.....	.....	.....	.....	.....	.....	
Brick, tile, and other clay products.....		64	1,663	7	345	842	77	790	11	389	9	652	1	171	.....	.....	.....	.....	.....	.....	
Canning and preserving.....		443	2,169	16	53	112	37	373	12	392	2	145	.....	.....	.....	.....	.....	.....	.....	.....	
Carriages and wagons and materials.....		119	1,246	.....	.....	.....	.....	.....	7	185	4	286	2	290	.....	.....	.....	.....	.....	.....	
Cars and general shop construction and repairs by steam-railroad companies.....		32	10,375	.....	1	4	3	37	4	127	6	400	9	1,670	3	1,139	4	2,901	2	4,037	
Clothing, men's, including shirts.....		32	1,282	1	6	17	9	104	4	126	8	577	4	458	.....	.....	.....	.....	.....	.....	
Coke, not including gas-house coke.....		11	852	.....	.....	.....	.....	.....	5	158	2	140	1	221	1	316	.....	.....	.....	.....	
Cooperage.....		110	1,390	3	72	183	27	285	5	130	1	76	1	716	2	716	.....	.....	.....	.....	
Copper, tin, and sheet-iron products.....		37	528	.....	23	41	11	127	1	34	1	64	.....	202	.....	.....	.....	.....	.....	.....	
Cotton goods.....		9	6,310	.....	.....	.....	.....	.....	1	50	2	142	.....	419	.....	.....	.....	.....	.....	.....	
Fertilizer.....		57	2,470	.....	7	15	22	271	9	275	13	1,110	6	799	1	419	1	607	2	4,673	
Flour-mill and gristmill products.....		533	1,082	99	401	692	31	287	1	32	1	71	.....	.....	.....	.....	.....	.....	.....	.....	
Foundry and machine-shop products.....		103	2,444	5	37	87	38	424	14	434	5	365	.....	.....	4	1,134	.....	.....	.....	.....	
Furniture.....		38	1,221	3	13	35	7	77	4	146	9	692	2	271	.....	.....	.....	.....	.....	.....	
Gas, illuminating and heating.....		22	533	2	6	20	6	70	4	125	3	179	1	139	.....	.....	.....	.....	.....	.....	
Glass.....		4	606	.....	.....	.....	.....	.....	.....	.....	1	100	8	506	.....	.....	.....	.....	.....	.....	
Hosiery and knit goods.....		13	2,272	.....	.....	.....	.....	.....	.....	.....	1	74	4	520	5	1,625	.....	.....	.....	.....	
Ice, manufactured.....		87	714	.....	47	123	31	321	8	210	1	60	.....	.....	.....	.....	.....	.....	.....	.....	
Iron and steel, blast furnaces.....		8	689	.....	.....	.....	.....	.....	1	28	5	362	2	299	.....	.....	.....	.....	.....	.....	
Leather goods.....		51	1,428	7	29	64	5	68	4	125	3	202	2	389	.....	.....	1	590	.....	.....	
Leather, tanned, curried, and finished.....		21	1,205	1	5	5	3	53	7	511	5	636	.....	.....	.....	.....	.....	.....	.....	.....	
Lime.....		34	694	.....	10	25	13	162	7	225	3	168	1	114	.....	.....	.....	.....	.....	.....	
Lumber and timber products.....		2,218	20,307	34	1,252	3,218	756	8,189	109	3,303	39	2,864	15	2,885	11	4,094	.....	.....	2	2,194	
Marble and stone work.....		76	1,200	8	45	98	10	124	6	237	4	262	2	222	1	317	.....	.....	.....	.....	
Paper and wood pulp.....		8	1,260	.....	.....	.....	.....	.....	2	93	1	78	3	433	.....	.....	1	637	.....	.....	
Peanuts, grading, roasting, cleaning, and shelling.....		25	1,505	1	3	8	2	35	6	180	8	559	5	723	.....	.....	.....	.....	.....	.....	
Printing and publishing.....		396	2,790	72	232	585	60	610	22	662	6	437	4	496	.....	.....	.....	.....	.....	.....	
Silk goods, including throwsters.....		9	691	.....	.....	.....	.....	.....	2	38	3	131	1	53	3	469	.....	.....	.....	.....	
Tobacco manufactures.....		76	6,308	12	35	91	9	91	6	187	2	170	6	843	2	588	1	517	3	3,823	
All other industries.....		724	18,938	40	393	890	161	1,776	68	2,153	31	2,253	25	3,550	1	366	3	2,313	2	5,637	



Table 20—Continued.

INDUSTRY AND CITY.	ESTABLISHMENTS EMPLOYING—													
	TOTAL.		No. wage earners.		1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.		51 to 100 wage earners.		101 to 250 wage earners.	
	Establishments.	Wage earners (average number).	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
Total for cities <sup>1</sup> .....	1,080	41,303	81	457	1,219	279	3,153	120	3,880	66	4,803	47	6,782	20
ALEXANDRIA.....	40	1,594	3	23	63	9	112	6	174	2	113	5	644	1
DANVILLE.....	43	2,061	8	13	33	12	127	9	273	3	233	1	102	1
LYNCHBURG.....	73	3,474	10	20	81	10	217	10	203	6	477	3	345	0
NORFOLK.....	211	5,000	11	243	53	602	30	884	10	751	11	1,558	5	1,862
PETERSBURG.....	87	3,003	3	32	88	24	200	12	370	10	608	3	528	1
PORTSMOUTH.....	42	707	2	20	48	13	152	4	119	2	154	1	294	1
RICHMOND.....	460	17,282	47	192	510	120	1,208	40	1,483	27	2,019	22	3,197	4
ROANOKE.....	73	5,400	4	84	85	17	189	9	200	4	277	2	328	1
STAUNTON.....	45	340	2	20	59	15	106	2	121	2	121	2	121	2

<sup>1</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

Table 21 presents, for 1914, percentages based on the figures in Table 20, and for 1909, similar percentages for all industries combined and for individual industries in the state as a whole.

Table 21

INDUSTRY AND CITY.	Census year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.								INDUSTRY AND CITY.	Census year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000			1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
		1914	1909	1914	1909	1914	1909	1914	1909			1914	1909	1914	1909	1914	1909	1914	1909
All industries.....	1914	7.2	14.7	10.2	12.8	16.3	11.7	7.3	10.8	Hosiery and knit goods.....	1914	2.1	1.2	15.3	23.2	71.5	.....	.....	.....
	1909	7.3	16.9	11.2	12.9	15.2	10.5	12.0	13.2		1909	.....	.....	.....	.....	.....	.....	.....	.....
Boots and shoes.....	1914	.....	.....	4.3	.....	30.1	65.6	.....	.....	Ice, manufactured.....	1914	17.2	45.0	20.4	8.4	.....	.....	.....	.....
	1909	0.1	0.2	1.1	5.2	10.2	12.7	20.0	40.0		1909	27.4	41.7	30.0	.....	.....	.....	.....	.....
Bread and other bakery products	1914	20.4	25.3	25.0	7.3	21.5	.....	.....	.....	Iron and steel, blast furnaces....	1914	.....	.....	4.1	52.5	43.4	.....	.....	.....
	1909	23.0	28.2	28.2	8.8	11.8	.....	.....	.....		1909	.....	1.5	3.8	46.7	48.0	.....	.....	.....
Brick, tile, and other clay products.	1914	2.2	25.0	23.4	39.2	10.3	.....	.....	.....	Leather goods.....	1914	4.5	4.8	8.8	14.1	27.2	.....	40.6	.....
	1909	4.5	18.5	27.0	25.0	11.4	12.7	.....	.....		1909	3.2	5.0	9.1	4.1	35.1	.....	42.9	.....
Canning and preserving.....	1914	38.8	36.4	18.1	6.7	.....	.....	.....	.....	Leather, tanned, curried, and finished.	1914	0.4	4.4	.....	42.4	52.7	.....	.....	.....
	1909	32.0	30.1	10.0	11.0	.....	.....	.....	.....		1909	1.4	.....	10.4	17.1	62.0	.....	.....	.....
Carriages and wagons and materials.	1914	9.0	20.0	14.8	23.0	23.3	.....	.....	.....	Lime.....	1914	3.6	23.3	32.4	24.2	16.4	.....	.....	.....
	1909	12.3	32.4	10.8	35.0	8.8	.....	.....	.....		1909	4.0	20.5	15.6	37.0	21.4	.....	.....	.....
Cars and general shop construction and repairs by steam-railroad companies.	1914	(1)	0.4	1.2	4.4	16.1	11.0	28.0	34.9	Lumber and timber products...	1914	12.2	31.1	12.8	10.0	9.1	15.6	.....	8.3
	1909	0.1	0.5	0.4	5.0	21.3	6.7	42.7	22.7		1909	10.8	35.3	14.8	7.3	9.1	11.6	6.6	4.5
Clothing, men's, including shirts.	1914	1.3	8.1	9.8	45.0	35.7	.....	.....	.....	Marble and stone work.....	1914	7.8	0.8	18.8	20.8	17.6	25.2	.....	.....
	1909	0.5	5.0	9.3	53.4	31.7	.....	.....	.....		1909	5.0	9.3	10.4	23.5	14.2	28.0	.....	.....
Coke, not including gas-house coke.	1914	.....	2.0	18.5	16.4	25.0	37.1	.....	.....	Paper and wood pulp.....	1914	.....	1.5	7.4	6.2	34.4	.....	50.6	.....
	1909	0.3	1.7	8.4	18.0	48.0	22.2	.....	.....		1909	0.2	1.3	.....	30.2	20.6	41.8	.....	.....
Cooperage.....	1914	13.2	20.5	9.4	5.5	.....	51.5	.....	.....	Peanuts, grading, roasting, cleaning, and shelling.	1914	0.5	2.3	12.0	37.1	48.0	.....	.....	.....
	1909	30.0	13.0	.....	.....	55.8	.....	.....	.....		1909	0.8	2.9	13.2	51.2	31.0	.....	.....	.....
Copper, tin, and sheet-iron products.	1914	7.8	24.1	6.4	12.1	.....	49.6	.....	.....	Printing and publishing.....	1914	21.0	21.0	23.7	15.7	17.8	.....	.....	.....
	1909	5.5	26.3	0.8	7.3	.....	54.0	.....	.....		1909	21.4	25.2	21.5	27.1	4.8	.....	.....	.....
Cotton goods.....	1914	.....	.....	0.8	2.3	6.0	6.6	0.6	74.1	Silk goods, including throwsters.	1914	.....	.....	5.5	19.0	7.7	67.0	.....	.....
	1909	.....	.....	0.5	2.3	7.3	8.0	18.0	63.0		1909	.....	.....	0.2	20.3	33.5	40.0	.....	.....
Fertilizers.....	1914	0.6	11.0	11.1	44.9	32.3	.....	.....	.....	Tobacco manufactures.....	1914	1.4	1.4	3.0	2.7	13.4	9.3	8.2	60.6
	1909	1.0	6.9	17.0	34.6	27.7	12.0	.....	.....		1909	1.5	1.9	4.2	0.9	14.6	10.6	40.4	16.9
Flour-mill and gristmill products	1914	64.0	26.5	3.0	6.0	.....	.....	.....	.....	All other industries.....	1914	4.7	9.4	11.4	11.0	18.7	1.9	12.2	20.8
	1909	61.5	25.0	6.7	6.7	.....	.....	.....	.....		1909	5.4	8.6	11.4	10.5	11.4	5.9	16.0	30.7
Foundry and machine-shop products.	1914	3.6	17.3	17.8	14.9	.....	46.4	.....	.....	Total for cities <sup>2</sup> .....	1914	2.9	7.6	9.4	11.6	16.4	16.3	10.0	25.8
	1909	3.9	16.3	16.0	15.1	11.0	37.1	.....	.....	ALEXANDRIA.....	1914	4.2	7.4	11.6	7.5	45.5	23.8	.....	.....
Furniture.....	1914	2.9	6.3	12.0	50.7	22.2	.....	.....	.....		1914	1.2	4.7	10.1	8.3	3.8	14.0	.....	57.8
	1909	3.2	5.1	27.8	51.2	12.7	.....	.....	.....	DANVILLE.....	1914	2.3	6.2	8.4	13.7	11.1	58.2	.....	.....
Gas, illuminating and heating...	1914	3.8	13.1	23.5	33.6	20.1	.....	.....	.....	LYNCHBURG.....	1914	4.1	10.2	15.0	12.7	26.4	31.6	.....	.....
	1909	4.2	24.0	24.1	46.8	.....	.....	.....	.....		1914	2.2	7.4	9.5	17.1	13.5	8.5	14.9	26.9
Glass.....	1914	.....	.....	16.5	83.5	.....	.....	.....	.....	NORFOLK.....	1914	0.3	19.8	15.5	20.1	.....	38.3	.....	.....
	1909	.....	.....	41.0	58.4	.....	.....	.....	.....		1914	3.0	7.5	8.6	11.7	18.5	7.0	20.5	23.2
	1914	.....	.....	.....	.....	.....	.....	.....	.....		1914	1.5	3.4	5.3	5.0	6.0	5.3	.....	73.5
	1909	.....	.....	.....	.....	.....	.....	.....	.....		1914	17.1	48.0	.....	35.0	.....	.....	.....	.....

<sup>1</sup> Less than one-tenth of 1 per cent.<sup>2</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

Of the 5,508 establishments reported for all industries, 324, or 5.9 per cent, employed no wage earners. In these establishments the work was done by proprie-

tors, firm members, or persons classed as salaried employees, or where wage earners were reported the number was so small and the term of employment so

short that in computing the average, as described in "Explanation of terms," the number was less than one person and the establishment was classed as one having "no wage earners." The proportions in the remaining groups were as follows: Those employing from 1 to 5 wage earners, 56.6 per cent; 6 to 20, 25.1 per cent; 21 to 50, 6.1 per cent; 51 to 100, 3.3 per cent; 101 to 250, 2.1 per cent; 251 to 500, six-tenths of 1 per cent; 501 to 1,000 and over 1,000, each, two-tenths of 1 per cent. The corresponding percentages for average number of wage earners—7.2, 14.7, 10.2, 12.8, 16.3, 11.7, 7.3, and 19.8, respectively—differ greatly from those given for number of establishments. The single group reporting the largest number of establishments is that for establishments employing from 1 to 5 wage earners and, while representing 56.6 per cent of the total number of establishments, comprised but 7.2 per cent of the total number of wage earners. The groups of establishments having more than 100 wage earners, although representing only 3.1 per cent of the total number of establishments, gave employment to 55.1 per cent of the total number of wage earners.

The single group reporting the largest number of employees is that for establishments employing over 1,000 wage earners, which gave employment to 20,364 wage earners, or 19.8 per cent of the total for all in-

dustries. This group shows an average of 1,851 wage earners per establishment. More than one-half of the total number employed in cotton goods and tobacco manufactures were in this group.

As an indication of the nature of the industries embracing the smaller establishments, it will be noticed that in bread and other bakery products; canning and preserving; cooperage; copper, tin, and sheet-iron products; flour-mill and gristmill products; ice; leather goods; lumber and timber products; marble and stone work; and printing and publishing the majority of the establishments employed from 1 to 5 wage earners.

For the cities of the state, 52 per cent of the wage earners in 1914 were reported for establishments employing 251 or more. The cities showing the largest percentages in these establishments were Roanoke, Danville, Lynchburg, Richmond, and Petersburg.

**Engines and power.**—Table 22 shows, for 1914, 1909, and 1904, for all industries combined, the number and horsepower of engines or motors employed in generating power (including electric motors operated by purchased current). It also shows separately the number and horsepower of electric motors operated by current generated in the establishments reporting.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904
Primary power, total.....	9,466	7,388	3,326	337,567	283,928	176,998	100.0	100.0	100.0
Owned.....	5,738	5,727	3,326	300,425	270,160	172,213	89.0	95.2	97.3
• Steam engines and turbines <sup>1</sup> .....	4,528	4,656	2,621	249,044	221,303	143,917	73.8	77.9	81.3
Internal-combustion engines.....	495	806	131	6,650	3,664	1,715	2.0	1.3	1.0
Water wheels, turbines, and motors.....	715	765	574	44,722	45,193	26,581	13.2	15.9	15.0
Rented.....	3,728	1,661	( <sup>2</sup> )	37,142	13,768	4,785	11.0	4.8	2.7
Electric.....	3,728	1,661	( <sup>2</sup> )	37,142	13,366	4,403	11.0	4.7	2.5
Other.....					412	382		0.1	0.2
Electric.....	6,581	2,036	( <sup>2</sup> )	102,013	42,043	12,687	100.0	100.0	100.0
Rented.....	3,728	1,661	( <sup>2</sup> )	37,142	13,366	4,403	36.4	31.8	34.7
Generated by establishments reporting.....	2,853	1,275	454	64,871	28,687	8,284	63.6	68.2	65.3

<sup>1</sup>Figures for horsepower include for 1909 and 1904 the amounts reported under the head of "other" owned power.

<sup>2</sup>Not reported.

The total primary power increased 53,639 horsepower, or 18.9 per cent, from 1909 to 1914, nearly one-half of which was due to the increase in rented power. The use of rented power, now wholly electric, has steadily increased since 1904, when it represented only 2.7 per cent of the total primary power reported, as compared with 4.8 per cent in 1909, and 11 per cent in 1914, whereas steam power has steadily decreased in importance during the decade. The horsepower of steam engines and turbines in 1914 formed 73.8 per cent of the total primary power as compared with 77.9 per cent in 1909 and 81.3 per cent in 1904.

The use of internal-combustion engines has increased rapidly during the decade. The horsepower, however,

of such engines represented only 2 per cent of the primary power in 1914.

The horsepower of electric motors operated by current generated in the same establishment formed 63.6 per cent of the total electric power in 1914, as against 68.2 per cent in 1909.

During the five-year period 1909-1914 there was a slight decrease in number and horsepower of water wheels, turbines, and motors, which in 1914 formed 13.2 per cent of the total primary power.

**Fuel.**—Closely related to the kind of power employed in manufactures is that of fuel consumed in generating this power or otherwise used in the manufacturing processes.

Table 23 shows, for 1914, the quantity of each kind of fuel used, for which data were obtained, for all industries combined and for certain selected industries

in the state as a whole, and for all industries combined in each of the cities in the state having more than 10,000 inhabitants.

INDUSTRY AND CITY.	COAL.		Coke (tons, 2,000 lbs.).	Oil, including gasoline (barrels).	Gas (1,000 cubic feet).
	An-thra-cite (tons, 2,240 lbs.).	Bitu-mi-nous (tons, 2,000 lbs.).			
All industries.....	14,081	2,823,202	558,028	128,600	607,690
Boots and shoes.....	.....	4,970	.....	.....	161
Bread and other bakery products.....	2,106	3,866	2,335	70	3,171
Brick, tile, and other clay products.....	60	112,474	4,157	853	.....
Canning and preserving.....	365	5,066	57	137	.....
Carriages and wagons and materials.....	91	4,002	3	215	240
Cars and general shop construction and repairs by steam-railroad companies.....	200	161,108	8,551	10,756	.....
Coke, not including gas-house coke.....	.....	1,292,094	403	50	1,083
Confectionery and ice cream.....	241	4,017	.....	.....	.....
Cotton goods.....	.....	50,429	.....	.....	.....
Dyestuffs and extracts.....	.....	32,356	.....	.....	.....
Fertilizers.....	954	50,284	.....	305	.....
Flour-mill and gristmill products.....	349	18,306	11	2,037	1,125
Foundry and machine-shop products.....	527	7,067	18,450	244	772
Furniture.....	160	4,639	.....	61	191
Gas, illuminating and heating.....	417	147,841	1,620	82,432	661,987
Glass.....	.....	10,350	.....	1,237	.....
Grease and tallow, not including lubricating greases.....	.....	9,233	.....	.....	.....
Hosiery and knit goods.....	.....	11,231	.....	28	.....
Ice, manufactured.....	.....	103,482	3,000	205	.....
Iron and steel, blast furnaces.....	.....	33,122	478,026	.....	.....
Leather, tanned, curried, and finished.....	.....	25,410	.....	211	133
Lime.....	3,840	34,746	2,024	3	.....
Liquors, distilled.....	.....	7,432	.....	154	.....
Liquors, malt.....	.....	18,027	.....	.....	.....
Lumber and timber products.....	27	67,430	353	754	.....
Marble and stone work.....	10	24,602	.....	105	160
Paper and wood pulp.....	.....	152,855	.....	600	.....
Peanuts, grading, roasting, cleaning, and shelling.....	27	0,104	22	10	150
Printing and publishing.....	1,144	3,671	08	325	12,232
Slaughtering and meat packing.....	.....	17,400	.....	20	184
Tobacco manufactures.....	325	20,357	2	22	160
All other industries.....	3,946	350,406	38,007	27,841	15,906
Total for cities.....	7,128	487,690	167,888	108,168	605,084
ALEXANDRIA.....	225	30,192	41	450	190
DANVILLE.....	124	27,154	230	157	1,038
LYNCHBURG.....	45	37,331	7,899	52	703
NORFOLK.....	676	86,017	12,416	24,025	4,613
PETERSBURG.....	52	23,162	922	1,512	1,134
PORTSMOUTH.....	702	7,933	520	2,970	1,635
RICHMOND.....	5,100	173,231	10,234	50,085	683,187
ROANOKE.....	42	89,010	134,701	17,487	2,562
STAUNTON.....	163	3,760	847	1,704	22

<sup>1</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

### SPECIAL STATISTICS.

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantities and cost of materials, the quantity and value of products, and other information for securing which no provision is made on the general schedule. Certain data of this character for five important industries in Virginia are here presented. Statistics for power laundries are also given.

Flour-mill and gristmill products.—Table 24 gives the quantities and values of flour-mill and gristmill products for 1914, 1909, and 1904.

	1914	1909	1904
Total value.....	\$18,084,413	\$17,508,045	\$13,832,200
Wheat flour:			
Barrels.....	2,181,707	1,898,712	1,777,160
Value.....	\$10,702,588	\$10,203,031	\$8,855,723
Rye flour:			
Barrels.....	4,746	3,204	2,477
Value.....	\$21,829	\$12,830	\$6,866
Buckwheat flour:			
Pounds.....	532,980	1,449,417	564,320
Value.....	\$16,452	\$35,080	\$14,336
Barley meal:			
Pounds.....	734,930	338,770	150,400
Value.....	\$12,680	\$5,657	\$2,212
Corn meal and corn flour:			
Barrels.....	1,099,215	1,410,351	1,218,294
Value.....	\$3,861,142	\$4,456,117	\$2,844,046
Bran and middlings:			
Tons.....	91,142	.....	.....
Value.....	\$2,457,357	109,142	103,028
Feed and offal:			
Tons.....	31,466	.....	.....
Value.....	\$933,213	.....	.....
All other cereal products, value.....	\$12,754	\$70,337	\$34,388
All other products, value.....	\$66,398	\$29,552	\$14,057

The two most important cereals consumed in the mills of the state in 1914 were wheat and corn. For the five-year period 1909-1914 the quantity of wheat used in the flour and grist mills increased 5.8 per cent, but for corn there was a decrease of 12.8 per cent.

Wheat flour constituted in 1914, 59.2 per cent of the total value of products, 58.3 per cent in 1909, and 64 per cent in 1904. When measured by quantity of production, a comparison with 1909 shows that wheat flour increased 13.9 per cent; rye flour, 48.1 per cent; barley meal, 116.9 per cent; and bran and middlings and feed and offal, 12.3 per cent. The equipment of the mills was 1,630 stands of rolls, 726 runs of stone, and 205 attrition mills. Twenty-three of the establishments manufactured barrels and one made sacks.

Leather, tanned, curried, and finished.—The following table gives the quantity and value of the principal kinds of leather produced in the state of Virginia in 1914, 1909, and 1904:

	1914	1909	1904
Total value.....	\$9,834,430	\$8,266,850	\$5,820,812
Leather:			
Oak sole—			
Soles.....	939,781	678,757	563,907
Value.....	\$7,535,109	\$4,878,035	\$2,020,054
Belling and harness—			
Soles.....	184,711	414,526	130,105
Value.....	\$1,475,819	\$2,378,897	\$590,059
All other, value.....	\$589,910	\$701,168	\$2,213,353
All other products, value.....	\$233,511	\$307,850	\$100,346

Oak sole leather predominated and formed 76.6 per cent of the total value of leather products for the state in 1914. Its production increased by 263,024 sides, or 39 per cent, as compared with 1909. Belting and harness and all other leather combined decreased \$1,014,336, or 32.9 per cent, during the five-year period 1909-1914. The production of rough leather and custom tanning have almost entirely ceased, though formerly of some importance in the state.

**Iron and steel, blast furnaces.**—Table 26 shows the quantity and value of the pig iron produced by the blast furnaces of the state in 1914, 1909, and 1904:

Table 26	1914	1909	1904
Total value.....	\$3,772,382	\$5,380,287	\$3,343,427
Pig iron:			
Tons.....	203,077	387,328	279,103
Value.....	\$3,753,082	\$5,324,997	\$3,333,273
All other products, value.....	\$19,300	\$55,290	\$10,154

The statistics show the effect of the industrial depression of 1914. The pig iron product in 1914 was nearly 25 per cent below that of 1909, in tonnage, and only a little greater than that of 1904, which was also a poor year. The blast-furnace equipment of the state at the close of the year 1914, active and idle plants, comprised 22 furnaces of 1,018,000 tons annual capacity, according to the annual statistical report of the American Iron and Steel Institute. Hence the year's output was not quite 30 per cent of the capacity of all furnaces. The product was chiefly foundry iron, forge or mill and all other grades, amounting to but 8,531 tons. Coke iron constituted nearly 99 per cent and charcoal iron a little over 1 per cent of the total tonnage.

**Printing and publishing.**—The relative importance of the different classes of newspapers and periodicals is probably best indicated by their aggregate circulation. Table 27 gives the number of the different classes of publications in Virginia, and the aggregate circulation per issue, for 1914, 1909, and 1904.

Table 27 PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1914	1909	1904	1914	1909	1904
Total.....	265	258	241	1,232,608	1,019,968	885,391
Daily.....	32	32	31	233,975	174,149	131,099
Sunday.....	9	8	10	117,531	79,258	62,688
Semiweekly and triweekly	6	12	8	13,385	16,789	17,000
Weekly.....	165	161	149	429,016	392,100	352,856
Monthly.....	31	28	30	232,195	183,605	167,448
Quarterly.....	16	7	10	201,475	167,111	150,000
All other classes <sup>1</sup> .....	6	10	3	5,031	6,950	4,300

<sup>1</sup> Of the "all other" classes of publications, three were issued bimonthly, two semiannually, and one semi-monthly.

The total number of publications in 1914 was 265, compared with 258 in 1909; 32, or 12.1 per cent, were dailies, and 165, or 62.3 per cent, weeklies. Of the total circulation in 1914, dailies constituted 19 per cent; weeklies, 34.8 per cent; and monthlies, 18.8 per cent. All of the publications were in the English language, except two, one daily and one weekly, which were

printed in German. All classes made gains in circulation during both five-year periods, except the semi-weeklies and triweeklies, which show a decrease. The circulation of the dailies increased from 174,149 in 1909 to 233,975 in 1914, a gain of 59,826, or 34.5 per cent; and that of the Sunday publications, from 79,258 to 117,531, an increase of 38,273, or 48.3 per cent. The circulation of the weeklies increased from 392,100 to 429,016, a gain of 36,916, or 9.4 per cent.

**Fertilizers.**—The following table shows the quantity and value of the materials used and the quantity and value of the different kinds of products reported for this industry, for 1904, 1909, and 1914.

Table 25	1914	1909	1904
<b>MATERIALS.</b>			
Total cost.....	\$7,995,921	\$5,389,110	\$3,240,675
Ammoniates:			
Tons.....	194,312	( <sup>1</sup> )	( <sup>1</sup> )
Cost.....	\$2,041,289	\$2,668,909	\$761,163
Cottonseed meal—			
Tons.....	10,762		
Cost.....	\$192,091		
Tankage and ammoniates, not elsewhere specified—			
Tons.....	56,813	59,635	( <sup>1</sup> )
Cost.....	\$1,024,731	\$1,043,117	\$567,530
Fish—			
Tons.....	126,737	( <sup>1</sup> )	( <sup>1</sup> )
Cost.....	\$824,497	\$1,625,792	\$193,633
Ammonium sulphate:			
Tons.....	18,414	6,417	1,119
Cost.....	\$1,125,171	\$378,451	\$73,634
Cyanamid or lime nitrogen:			
Tons.....	2,088	( <sup>1</sup> )	( <sup>1</sup> )
Cost.....	\$92,581	( <sup>1</sup> )	( <sup>1</sup> )
Nitrate of soda:			
Tons.....	11,611	4,882	5,473
Cost.....	\$546,069	\$216,431	\$225,697
Phosphate rock:			
Tons.....	130,199	75,493	69,755
Cost.....	\$748,890	\$465,220	\$370,928
Bones, raw, steamed, and ground:			
Tons.....	4,206	( <sup>1</sup> )	( <sup>1</sup> )
Cost.....	\$108,344	( <sup>1</sup> )	( <sup>1</sup> )
Pyrites:			
Tons.....	48,378	22,283	31,142
Cost.....	\$231,464	\$138,555	\$145,927
Sulphuric acid:			
Purchased—			
Tons.....	23,612	21,250	14,343
Cost.....	\$132,886	\$93,528	\$83,507
Made and consumed, tons.....	93,071	53,253	( <sup>1</sup> )
Superphosphate:			
Purchased—			
Tons.....	63,228	30,877	14,003
Cost.....	\$492,450	\$291,329	\$116,281
Made and consumed (acid phosphate), tons.....	187,940	96,417	( <sup>1</sup> )
Kainit:			
Tons.....	24,798	29,941	26,109
Cost.....	\$193,366	\$256,883	\$256,915
Potash salts:			
Tons.....	33,697	8,121	3,277
Cost.....	\$696,480	\$206,368	\$127,190
All other materials, cost.....	\$1,586,031	\$613,436	\$1,080,433
<b>PRODUCTS.</b>			
Total value.....	\$11,581,495	\$8,253,081	\$4,659,281
The fertilizer industry, value.....	\$11,350,120	\$8,094,543	\$4,659,281
Subsidiary fertilizer products from other industries, value.....	\$231,375	\$218,538	( <sup>1</sup> )
Fertilizers:			
Tons.....	541,690	373,407	248,347
Value.....	\$9,524,113	\$6,779,325	\$3,879,385
Complete and ammoniated fertilizers—			
Tons.....	375,256	197,272	165,951
Value.....	\$7,576,028	\$4,128,046	\$3,028,705
Superphosphates—			
Tons.....	76,130	68,389	52,207
Value.....	\$699,054	\$794,367	\$502,016
Other fertilizers—			
Tons.....	90,304	107,746	30,189
Value.....	\$1,278,431	\$1,856,912	\$348,604
Fish scrap:			
Tons.....	27,906	32,199	( <sup>1</sup> )
Value.....	\$947,902	\$998,761	( <sup>1</sup> )
Oil:			
Gallons.....	1,777,369	605,755	( <sup>1</sup> )
Value.....	\$548,522	\$142,835	( <sup>1</sup> )
All other products, value.....	\$560,958	\$332,160	\$779,896

<sup>1</sup> Figures not available.

The total production of fertilizers in 1914 was 541,690 tons, of which complete and ammoniated fertilizers constituted 69.3 per cent, superphosphates 14 per cent, and other fertilizers 16.7 per cent.

In 1914 the fertilizer industry gave employment to 2,470 wage earners, an increase of 26.3 per cent over the number reported for 1909, and during the same period the value of products increased \$3,315,577, or 41.3 per cent.

**Laundries.**—Statistics for power laundries are not included in the general tables or in the totals for all manufacturing industries. Table 29 summarizes these statistics for Virginia for 1914 and 1909.

Table 29

	POWER LAUNDRIES.		
	Number or amount.		Per cent of increase 1909-1914.
	1914	1909	
Number of establishments.....	71	57	24.6
Persons engaged.....	1,965	1,523	29.0
Proprietors and firm members.....	70	63	11.1
Salaried employees.....	195	109	78.9
Wage earners (average number).....	1,694	1,351	25.4
Primary horsepower.....	1,918	1,199	60.0
Capital.....	\$1,055,152	\$835,907	26.3
Salaries and wages.....	901,003	593,946	50.7
Salaries.....	107,260	89,600	19.9
Wages.....	524,337	414,377	26.5
Paid for contract work.....	16,593	296	5,475.3
Rent and taxes.....	38,532	22,652	70.9
Cost of materials.....	285,800	173,097	65.1
Amount received for work done.....	1,453,912	1,003,191	44.9

<sup>1</sup> Percentages are omitted where base is less than 100.

In 1914 Virginia ranked twenty-fifth among the states in amount received for work done and twenty-second in number of persons engaged in the industry; in 1909 it ranked twenty-sixth and twenty-third, respectively. The table shows increases in all items for the five-year period. Establishments owned by individuals reported 33.7 per cent of the amount received for work done; those owned by corporations, 45.6 per cent; and those under other forms of ownership, 20.7 per cent. For 1909 these percentages were 41.1, 32, and 26.9 per cent, respectively.

Table 30 shows, for 1914 and 1909, the number of wage earners employed in the laundries on the 15th of each month, or the nearest representative day, and the percentage which this number represents of the greatest number employed in any month of the same year.

Table 30

MONTH.	WAGE EARNERS.			
	Number.		Per cent of maximum.	
	1914	1909	1914	1909
January.....	1,601	1,283	90.6	90.9
February.....	1,608	1,275	91.0	90.3
March.....	1,613	1,279	91.3	90.6
April.....	1,674	1,314	94.7	93.1
May.....	1,680	1,370	96.2	97.0
June.....	1,727	1,390	97.7	98.4
July.....	1,761	1,412	98.7	100.0
August.....	1,751	1,401	99.1	99.2
September.....	1,767	1,395	100.0	98.8
October.....	1,748	1,376	97.2	97.5
November.....	1,718	1,361	97.2	96.4
December.....	1,700	1,354	96.2	95.0

Table 31 gives statistics as to kinds and amounts of power used in the laundries of the state in 1914 and 1909, together with percentages of increase for the five-year period.

Table 31

KIND.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.		
			Amount.		Per cent of increase, 1909-1914.
	1914	1909	1914	1909	
Primary power, total.....	149	114	1,918	1,199	60.0
Owned.....	67	55	1,433	1,048	55.8
Steam.....	66	53	1,615	1,031	56.6
Internal combustion.....	1	2	18	17	5.9
Rented.....	82	59	285	151	88.7
Electric.....	82	59	247	151	63.6
Other.....			38		
Electric—Generated by establishments reporting.....	62		126		

<sup>1</sup> Percentages are omitted where base is less than 100.

Table 32 shows the kinds and quantities of fuel used in the laundries, as reported at the censuses of 1914 and 1909, with percentages of increase.

Table 32

KIND.	Unit.	QUANTITY.		Per cent of increase, 1909-1914.
		1914	1909	
Anthracite coal.....	Ton, 2,240 lbs.....	1,372	84	45.0
Bituminous coal.....	Ton, 2,000 lbs.....	18,715	12,900	
Coke.....	Ton, 2,000 lbs.....		2,515	
Oil.....	Barrels.....	29	9	
Gas.....	1,000 cubic feet.....	6,377	7,215	-11.0

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100.

## GENERAL TABLES.

Table 33 gives, for 1914, 1909, and 1904, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for selected industries in the state and in the cities having 50,000 inhabitants or more, and for the cities having from 10,000 to 50,000 inhabitants, exclusive of Newport News, similar data for all industries combined.

Table 34 presents, for 1914, in the state as a whole and in cities with 50,000 inhabitants or more, statistics in detail for each industry that can be shown without the disclosure of the operations of individual establishments; and for each of the cities in the state having from 10,000 to 50,000 inhabitants, exclusive of Newport News, similar data for all industries combined.

TABLE 33.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Expressed in thousands.			INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Expressed in thousands.		
					Wages.	Cost of mater- ials.	Value of prod- ucts.						Wages.	Cost of mater- ials.	Value of prod- ucts.
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.															
All industries.....	1914 1909 1904	5,508 5,085 3,187	102,820 105,076 80,285	337,567 283,928 170,908	\$44,873 38,154 27,943	\$155,320 125,583 83,640	\$264,039 210,794 148,857	Cotton goods.....	1914 1909 1904	9 10 10	6,310 5,057 3,456	34,220 19,750 9,340	\$2,174 1,480 884	\$6,057 4,009 2,802	\$10,216 7,490 4,484
Agricultural imple- ments.	1914 1909 1904	20 16 11	209 272 314	539 503 383	122 117 116	168 244 182	484 516 404	Dyestuffs and extracts..	1914 1909 1904	13 14 12	429 346 424	4,309 4,209 4,400	161 123 137	1,138 686 393	1,677 1,200 737
Boots and shoes.....	1914 1909 1904	8 10 6	1,555 2,711 1,738	1,343 1,410 615	716 805 309	2,561 4,020 1,015	3,709 5,800 2,027	Fertilizers.....	1914 1909 1904	57 45 37	2,470 1,956 1,801	19,577 5,500 5,643	1,051 700 571	7,996 5,389 3,241	11,350 8,035 4,559
Boxes and cartons, paper.	1914 1909 1904	14 10 8	499 558 549	406 193 127	151 153 104	280 153 105	726 413 324	Flour-mill and grist- mill products.	1914 1909 1904	533 458 365	1,082 1,014 957	23,086 21,454 16,082	463 398 349	15,390 15,164 12,171	18,084 17,598 13,832
Bread and other bakery products.	1914 1909 1904	140 135 80	1,033 870 569	1,161 761 221	559 418 236	2,188 1,721 1,061	3,697 2,766 1,606	Foundry and machine- shop products.	1914 1909 1904	103 110 74	2,444 2,708 2,095	7,828 4,012 2,671	1,413 1,885 917	8,565 5,148 1,404	9,906 5,727 3,393
Brick, tile, and other clay products.	1914 1909 1904	64 86 84	1,663 2,090 1,904	5,852 5,540 4,977	614 732 680	513 510 429	1,493 1,922 1,804	Furniture.....	1914 1909 1904	38 34 26	1,221 990 713	2,783 2,326 1,500	520 349 229	1,080 724 382	2,085 1,438 803
Butter.....	1914 1909 1904	13 8 4	90 10 3	245 135 14	48 4 1	470 35 16	608 44 20	Gas, illuminating and heating.	1914 1909 1904	22 21 19	533 378 268	1,488 1,116 357	306 217 136	750 431 285	2,150 1,472 980
Canning and preserving.	1914 1909 1904	1443 325 170	2,169 1,860 1,071	3,907 1,382 1,048	360 277 181	1,632 1,208 790	2,360 1,854 1,218	Glass.....	1914 1909 1904	4 5 4	606 524 472	236 245 100	328 306 264	258 251 169	690 682 549
Carriages and wagons and materials.	1914 1909 1904	119 130 102	1,246 1,329 1,332	2,229 2,032 1,735	586 529 473	1,530 1,283 1,196	2,748 2,485 2,292	Grease and tallow, not including lubricating greases.	1914 1909 1904	5 3 3	213 134 65	793 225 375	106 61 32	469 155 76	671 220 136
Cars and general shop construction and re- pairs by electric-rail- road companies.	1914 1909 1904	11 7	317 117	458 121	207 72	156 82	426 162	Hosiery and knit goods.	1914 1909 1904	13 11 14	2,272 1,715 1,842	1,848 1,079 1,211	751 503 430	2,108 1,467 1,326	3,516 2,463 2,108
Cars and general shop construction and re- pairs by steam-rail- road companies.	1914 1909 1904	32 28 29	10,375 7,588 7,345	6,980 6,412 4,117	6,697 4,082 3,663	10,762 5,255 4,577	18,216 9,956 8,693	Ice, manufactured.....	1914 1909 1904	87 74 48	714 475 346	13,057 8,553 4,604	378 220 138	501 268 172	1,796 1,143 636
Clothing, men's, in- cluding shirts.	1914 1909 1904	32 23 20	1,282 1,160 891	340 346 239	383 288 201	1,792 1,160 642	2,765 1,819 1,142	Iron and steel, blast furnaces.	1914 1909 1904	8 14 10	689 1,320 1,081	15,210 17,320 12,465	352 546 346	3,282 4,418 2,717	3,772 5,389 3,843
Coffee and spice, roast- ing and grinding.	1914 1909 1904	9 10 4	75 78 28	281 263 53	29 36 8	918 925 184	1,137 1,206 246	Leather goods.....	1914 1909 1904	51 31 22	1,428 1,487 1,363	1,105 958 599	624 527 479	1,943 1,901 1,148	3,464 3,492 2,120
Coke, not including gas- house coke.	1914 1909 1904	11 16 13	852 1,425 1,094	2,057 1,760 4,830	384 543 440	1,070 1,818 1,183	1,607 2,416 1,885	Leather, tanned, cur- ried, and finished.	1914 1909 1904	21 39 44	1,205 1,500 1,055	3,648 4,223 2,508	525 580 358	8,218 6,445 4,719	9,834 8,267 5,830
Confectionery.....	1914 1909 1904	32 33 17	480 341 226	551 341 214	165 103 68	1,401 1,103 474	1,952 1,525 688	Lime.....	1914 1909 1904	34 35 20	694 716 418	1,729 924 371	273 232 148	471 300 236	995 856 497
Cooperage.....	1914 1909 1904	110 114 42	1,390 788 601	1,340 1,236 1,029	480 251 170	1,409 662 451	2,231 1,090 793	Liquors, distilled.....	1914 1909 1904	47 65 98	123 126 114	1,111 1,557 999	52 48 30	475 233 84	1,850 1,672 431
Copper, tin, and sheet- iron products.	1914 1909 1904	37 43	528 818	499 296	265 361	1,002 1,061	1,632 2,048	Liquors, malt.....	1914 1909 1904	6 6 6	310 354 272	2,810 3,176 2,172	240 185 151	533 411 292	1,545 1,616 1,201

<sup>1</sup> Includes "canning and preserving, fish;" "canning and preserving, fruits and vegetables;" "canning and preserving, oysters;" and "pickles, preserves, and sauces."

<sup>2</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.

<sup>3</sup> Includes "tinware, not elsewhere specified."

<sup>4</sup> Includes "automobile repairing;" "gas machines;" "iron and steel, cast-iron pipe;" "pumps, steam;" "steam fittings and steam and hot-water heating apparatus;"

and "structural ironwork, not made in steel works or rolling mills."

<sup>5</sup> Includes "saddlery and harness" and "trunks and valises."

## MANUFACTURES—VIRGINIA.

TABLE 33.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.															
Lumber and timber products.	1914 1909 1904	2,218 2,617 938	26,307 33,287 15,134	85,754 90,474 44,212	\$9,021 9,002 4,972	\$13,305 13,892 6,891	\$32,440 35,855 18,727	Slaughtering and meat packing.	1914 1909 1904	21 24 14	300 342 158	3,084 1,491 650	\$212 118 69	\$3,725 4,057 1,740	\$4,342 4,601 1,906
Marble and stone work.	1914 1909 1904	76 70 15	1,260 1,585 587	3,670 4,553 933	568 051 234	388 351 108	1,404 1,300 595	Stoves and ranges.....	1914 1909 1904	5 9 4	324 303 290	555 404 300	208 206 186	187 212 181	528 683 537
Mattresses and spring beds.	1914 1909 1904	22 18 14	159 103 73	283 181 90	76 41 28	227 120 94	445 244 145	Tobacco manufactures..	1914 1909 1904	76 104 143	6,308 7,882 7,931	3,259 3,591 3,345	2,165 2,162 1,820	12,102 11,180 6,604	30,000 25,385 16,768
Mineral and soda waters	1914 1909 1904	88 76 28	290 222 105	465 227 55	123 78 38	581 275 61	1,197 922 195	Upholstering materials, excelsior.	1914 1909 1904	14 10 10	177 129 109	1,010 1,235 1,040	97 41 37	145 78 71	275 176 162
Paper and wood pulp...	1914 1909 1904	8 9 9	1,260 912 993	13,585 9,770 7,800	692 412 363	3,424 2,148 1,780	5,501 3,657 3,034	Vinegar and cider.....	1914 1909 1904	12 28 6	27 32 17	123 286 54	12 10 4	185 213 31	271 358 61
Peanuts, grading, roast- ing, cleaning, and shelling.	1914 1909 1904	25 25 20	1,505 1,516 1,332	2,073 2,271 1,502	328 258 106	9,518 7,126 6,149	10,081 7,033 7,055	Wood, turned and carved.	1914 1909 1904	10 19 13	223 135 97	1,223 737 552	74 38 20	138 71 28	340 151 79
Printing and publishing	1914 1909 1904	300 369 309	2,700 2,555 2,101	2,881 2,210 1,300	1,596 1,307 903	2,097 1,405 973	7,070 5,370 3,522	Woolen goods.....	1914 1909 1904	12 16 24	431 542 649	911 1,352 1,656	108 176 170	420 507 760	700 999 1,250
Silk goods, including throwsters.	1914 1909	9 7	601 810	1,798 1,858	210 201	1,094 1,011	1,773 1,544	All other industries....	1914 1909 1904	361 315 232	14,106 12,257 16,233	52,816 34,810 28,501	7,361 5,758 6,567	25,044 15,409 13,222	40,165 26,219 25,250

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

<b>NORFOLK</b> —All in- dustries.								<b>RICHMOND</b> —Con. Broad and other bakery products.							
1914	211	5,900	13,038	\$2,534	\$3,308	\$14,955		1914	21	446	450	\$231	\$925	\$1,015	
1909	215	4,749	20,408	2,041	5,482	10,311		1909	23	408	334	101	830	1,201	
1904	121	2,935	.....	1,091	3,202	5,739		1904	18	266	.....	100	521	760	
Bread and other bakery products.	1914 1909 1904	15 17 13	199 178 112	250 210 .....	129 95 63	539 350 204	836 595 335	Carriages and wagons...	1914 1909 1904	10 14 12	117 124 122	101 53 .....	79 71 55	96 104 45	257 286 140
Ice, manufactured.....	1914 1909 1904	8 0 4	108 70 60	3,572 1,500 .....	80 43 24	115 93 51	419 225 132	Confectionery.....	1914 1909 1904	10 10 0	154 156 86	188 120 .....	59 43 28	423 254 180	608 400 274
Lumber and timber products.	1914 1909 1904	13 13 7	1,173 1,052 264	2,672 14,082 .....	468 408 103	1,933 748 439	1,912 1,515 671	Ice, manufactured.....	1914 1909 1904	8 0 4	94 60 74	2,003 1,452 .....	51 33 33	71 37 26	286 199 109
Mineral and soda waters.	1914 1909	6 5	36 27	52 22	14 13	93 63	178 127	Leather goods.....	1914 1909 1904	13 12 5	348 387 83	278 210 .....	108 160 28	738 594 144	1,210 1,045 236
Printing and publishing	1914 1909 1904	35 33 22	224 251 233	296 255 .....	155 155 120	247 151 106	840 684 410	Lumber and timber products.	1914 1909 1904	17 15 13	689 632 407	2,410 1,720 .....	370 286 186	710 650 377	1,310 1,187 718
Tobacco, cigars and cig- arettes.	1914 1909 1904	15 13 9	48 70 70	..... ..... .....	30 42 38	44 59 41	100 139 124	Marble and stone work..	1914 1909 1904	13 9 7	71 53 72	130 54 .....	53 30 37	32 84 89	113 92 89
All other industries.....	1914 1909 1904	110 128 66	4,112 3,083 2,100	6,187 4,339 .....	1,652 1,195 734	9,246 4,948 2,364	10,655 7,650 4,061	Mineral and soda waters	1914 1909	10 7	47 23	62 17	20 12	151 26	271 64
<b>RICHMOND</b> —All in- dustries.								Printing and publishing	1914 1909 1904	103 82 71	1,334 1,080 807	1,470 941 .....	758 585 300	1,213 732 531	3,811 2,780 1,747
Boxes and cartons, pa- per.	1914 1909 1904	9 6 4	360 444 466	301 160 .....	110 99 85	120 90 50	501 276 223	All other industries.....	1914 1909 1904	243 196 164	13,622 11,473 9,071	26,529 15,011 .....	6,505 4,305 3,208	20,065 20,887 11,846	52,410 39,732 23,440

<sup>1</sup> Includes "boxes, wooden packing;" "lumber, planing-mill products, not including planing mills connected with sawmills;" and "window and door screens."

<sup>2</sup> Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."

<sup>3</sup> Excludes statistics for one establishment, to avoid disclosure of individual operations.

<sup>4</sup> Includes "boxes, wooden packing;" and "lumber, planing-mill products, not including planing mills connected with sawmills."

<sup>5</sup> Includes "engraving, steel and copper plate, including plate printing."

<sup>6</sup> Includes "saddlery and harness" and "trunks and valises."

<sup>7</sup> Excludes statistics for two establishments, to avoid disclosure of individual operations.



# MANUFACTURES—VIRGINIA.

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TABLE 33.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		
CITIES OF 10,000 TO 50,000 INHABITANTS <sup>1</sup> —ALL INDUSTRIES COMBINED.															
ALEXANDRIA.....	1914	49	1,504	3,375	\$858	\$1,960	\$3,660	PORTSMOUTH.....	1914	42	767	2,664	\$347	\$1,017	\$1,731
	1909	54	1,470	3,250	697	2,731	4,420		1909	31	842	1,777	307	770	1,525
	1904	51	1,291	.....	655	992	2,187		1904	28	551	.....	185	486	945
DANVILLE.....	1914	43	2,691	7,209	1,042	3,212	5,558	ROANOKE.....	1914	73	5,496	11,708	3,826	11,198	16,582
	1909	52	3,076	4,634	963	3,236	5,389		1909	62	3,544	6,774	1,718	4,044	7,261
	1904	34	3,018	.....	811	2,766	4,775		1904	54	3,089	.....	1,520	3,232	5,545
LYNCHBURG.....	1914	73	3,474	6,505	1,545	6,511	9,919	STAUNTON.....	1914	45	346	850	149	1,037	1,448
	1909	82	4,020	7,952	1,544	6,468	10,188		1909	44	339	601	118	896	1,223
	1904	55	2,534	.....	789	2,882	4,965								
PETERSBURG.....	1914	87	3,903	6,540	1,392	8,393	12,610								
	1909	72	3,887	5,230	1,107	5,750	8,896								
	1904	72	3,288	.....	866	3,794	5,891								

<sup>1</sup> Statistics for Newport News are omitted, to avoid disclosure of individual operations.

## MANUFACTURES—VIRGINIA.

TABLE 34.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.		Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.
			Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.				Total.	16 and over.		Under 16.			
						Male.	Female.	Average number.	Number, 15th day of--		Male.		Female.	Male.	Female.			
									Maximum month.	Minimum month.								
1	All industries.....	5,508	118,100	6,125	3,200	4,744	1,130	102,820	Se 108,500	De 93,522	(2)	(2)	(2)	(2)	(2)	\$201,501,288		
2	Agricultural implements.....	20	318	18	10	10	5	209	Fe 321	No 243	252	250	2	.....	.....	561,806		
3	Automobile repairing.....	3	6	1	.....	.....	.....	5	(2) 5	(2) 5	5	5	.....	.....	.....	10,907		
4	Awnings, tents, and sails.....	10	60	5	4	2	2	48	Ja 75	Ja 35	48	35	13	.....	.....	49,048		
5	Bookbinding and blank-book making	6	220	0	3	2	3	209	Au 232	De 101	191	68	116	2	5	253,190		
6	Boots and shoes.....	8	1,738	0	30	46	93	1,555	Ja 1,730	De 1,140	1,540	904	509	46	21	2,452,888		
7	Boxes and cartons, paper.....	14	570	7	33	21	10	499	Fe 519	Jy 472	507	181	310	5	5	611,182		
8	Boxes, wooden packing.....	21	2,102	10	65	37	11	1,080	Ap 2,247	Au 1,048	2,233	1,088	355	155	35	2,423,379		
9	Bread and other bakery products.....	140	1,386	148	40	112	47	1,033	Ja 1,067	Fe 990	1,078	932	130	16	.....	1,725,547		
10	Brick, tile, and other clay products..	64	1,800	40	58	22	8	1,003	Ja 2,294	Fe 901	1,084	1,938	46	.....	.....	3,634,050		
11	Brooms.....	12	57	11	2	1	.....	43	Mh 45	No 40	43	30	1	3	.....	27,570		
12	Butter.....	13	110	5	8	11	5	90	Jy 103	Ja 82	91	87	.....	4	.....	183,909		
13	Canning and preserving, fish.....	19	244	14	11	7	1	211	Ap 561	Fe 0	577	341	180	40	10	339,742		
14	Canning and preserving, fruits and vegetables.	412	2,492	642	48	7	2	1,793	.....	.....	8,021	2,000	4,785	518	058	1,507,300		
15	Canned vegetables.....	402	2,389	626	42	7	1	1,713	Se 8,372	Ja 0	8,050	2,527	4,658	515	050	1,234,535		
16	Canned fruits.....	7	77	15	5	.....	1	50	Se 135	De 9	167	98	64	3	2	242,370		
17	Dried fruits.....	3	20	1	1	.....	.....	24	Oc 98	Se 34	98	35	63	.....	.....	30,485		
18	Carriage and wagon materials.....	6	197	3	0	7	1	180	Ja 204	De 150	151	149	.....	2	.....	350,209		
19	Carriages, wagons, and repairs.....	113	1,327	130	57	63	11	1,006	.....	.....	907	958	4	5	.....	3,084,103		
20	Carriages and wagons.....	96	1,274	111	57	63	11	1,032	Ja 1,198	No 747	932	923	4	5	.....	3,049,718		
21	Repair work only.....	17	53	19	.....	.....	.....	34	Au 4 36	Ja 31	35	35	.....	.....	.....	34,475		
22	Cars and general shop construction and repairs by electric-railroad companies.	11	338	.....	15	6	.....	317	Jy 345	Fe 300	205	202	3	.....	.....	7,019,648		
23	Cars and general shop construction and repairs by steam-railroad companies.	32	11,027	.....	130	512	10	10,375	Mh 10,013	Au 10,050	10,429	10,419	10	.....	.....	6,258,140		
24	Clothing, men's and youths'.....	20	1,383	17	40	81	21	1,224	Mh 1,400	Se 971	1,220	142	1,067	5	6	1,400,127		
25	Coffee and spice,roasting and grinding	9	176	6	12	68	15	75	De 78	Oc 71	78	50	19	3	.....	412,021		
26	Coke, not including gas-house coke..	11	922	.....	17	52	1	852	Fe 1,000	Oc 093	971	971	.....	.....	.....	3,008,051		
27	Confectionery and ice cream.....	66	847	56	51	99	24	617	.....	.....	707	440	252	6	.....	1,380,225		
28	Confectionery and chewing gum.....	32	610	23	31	00	13	480	De 529	Ja 425	610	286	233	.....	.....	920,390		
29	Ice cream.....	34	231	33	20	30	11	137	De 175	Ja 103	188	163	10	0	.....	450,820		
30	Cooperage.....	110	1,640	187	38	21	4	1,390	.....	.....	1,010	1,704	103	43	9	1,244,500		
31	Hogsheads and barrels.....	100	1,621	183	38	21	4	1,375	Ja 1,701	Au 811	1,801	1,081	103	38	9	1,232,410		
32	All other.....	4	19	.....	.....	.....	.....	15	Ja 25	De 2	28	23	.....	5	.....	12,180		
33	Copper, tin, and sheet-iron work....	34	247	41	15	19	4	108	Jy 194	Fe 149	191	190	1	.....	.....	410,083		
34	Cotton goods.....	9	6,370	23	44	2	.....	6,310	De 6,713	Au 5,857	6,817	4,431	2,088	160	129	18,437,808		
35	Dairymen's, poultrymen's, and ap- parists' supplies.....	15	114	19	5	6	1	83	Mh 128	Se 50	86	80	.....	0	.....	166,141		
36	Druggist's preparations.....	5	64	3	7	12	2	40	Au 47	Ja 34	42	11	28	2	1	91,068		
37	Dyestuffs and extracts.....	13	480	6	27	13	5	429	De 455	Ja 377	480	483	.....	0	.....	2,002,230		
38	Engraving, steel and copper plate, including plate printing.....	4	28	3	.....	.....	3	22	Oc 4 23	Ja 21	23	14	7	2	.....	8,550		
39	Fertilizers.....	57	2,846	7	126	209	34	2,470	Ap 3,246	De 1,227	3,217	3,215	.....	2	.....	20,550,658		
40	Flour-mill and gristmill products....	533	1,995	682	118	75	38	1,082	Au 1,118	My 1,030	1,126	1,123	2	1	.....	8,911,304		
41	Food preparations.....	11	74	10	0	3	.....	40	Fe 58	Au 41	57	40	2	1	5	141,351		
42	Foundry and machine-shop products	89	1,187	94	71	53	10	993	.....	.....	970	967	1	2	.....	2,097,570		
43	Boiler and machine shops.....	69	1,005	66	64	48	14	813	Ja 845	No 780	820	827	1	1	.....	2,680,162		
44	Foundries.....	14	182	18	7	5	2	150	Ja 175	De 137	141	140	.....	1	.....	311,408		
45	Furniture.....	38	1,361	32	50	45	13	1,221	.....	.....	1,171	1,000	4	77	.....	1,972,474		
46	Wood, other than rattan and wil- low.....	34	1,242	28	47	44	10	1,113	Mh 1,187	De 1,038	1,064	983	4	77	.....	1,843,407		
47	Store and office fixtures.....	4	119	4	3	1	3	108	Ap 115	Ja 93	107	107	.....	.....	.....	120,067		
48	Gas, illuminating and heating.....	22	650	1	34	56	26	533	Ja 680	Oc 467	488	488	.....	.....	.....	7,407,783		
49	Glass.....	4	624	.....	11	3	4	606	Ap 700	Au 70	609	618	22	20	.....	543,554		
50	Grease and tallow, not including lu- bricating greases.....	5	241	2	13	10	3	213	Se 240	De 103	193	193	.....	.....	.....	387,270		
51	Hosiery and knit goods.....	13	2,335	7	21	26	9	2,272	Ap 2,361	Au 2,150	2,255	785	1,215	98	157	2,014,300		
52	Ice, manufactured.....	87	941	68	65	55	9	714	Jy 1,020	Ja 502	755	737	.....	18	.....	4,215,204		
53	Iron and steel, blast furnaces.....	8	743	.....	24	30	.....	680	Mh 844	No 371	720	718	.....	2	.....	4,250,389		
54	Leather, tanned, curried, and finished.	21	1,285	16	32	27	6	1,205	Ja 1,317	De 1,115	1,145	1,048	35	2	.....	9,289,330		
55	Lime.....	34	787	10	42	24	8	604	Ap 827	De 547	647	647	.....	.....	.....	1,253,823		
56	Liquors, distilled.....	47	200	44	21	8	4	123	.....	.....	192	190	2	.....	.....	206,220		
57	Whisky.....	15	139	10	21	8	4	90	De 118	Au 66	122	122	.....	.....	.....	234,838		
58	Fruit brandy.....	32	61	34	.....	.....	.....	27	Se 70	Ja 1	70	68	2	.....	.....	61,382		
59	Liquors, malt.....	6	386	.....	34	38	4	310	Jy 345	De 287	324	324	.....	.....	.....	2,757,882		
60	Looking-glass and picture frames....	4	14	2	2	.....	.....	10	Mh 12	Se 9	12	10	2	.....	.....	12,033		
61	Lumber and timber products.....	2,031	25,320	2,591	354	247	34	22,100	Ap 24,448	De 19,694	28,564	28,322	23	217	2	21,515,522		
62	Lumber, planing-mill products.....	164	2,671	175	154	98	28	2,216	Ja 2,360	De 2,057	2,190	2,147	1	51	.....	4,826,497		
63	Marble and stone work.....	76	1,435	78	46	47	4	1,260	.....	.....	1,319	1,261	.....	58	.....	4,741,446		
64	Marble and stone work, other than slate.....	71	1,049	76	32	36	3	902	Se 993	Fe 769	984	980	.....	4	.....	2,192,800		
65	Roofing slate.....	5	386	2	14	11	1	358	Jy 401	Fe 324	335	281	.....	54	.....	2,548,646		

1 Owned power only.

2 No figures given for reason stated under "Explanation of terms."

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal combustion engines.	Water wheels and motors. <sup>1</sup>	Electric (rented).	

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$5,803,051	\$5,381,700	\$4,873,435	\$1,803,022	\$656,410	\$8,717,117	\$147,872,130	\$7,447,446	\$261,039,041	\$108,719,465	337,507	249,044	6,659	44,722	37,142	64,871	1
24,526	10,733	121,064	.....	4,830	2,963	155,987	11,929	484,240	316,324	539	286	67	20	166	.....	2
.....	.....	8,802	.....	3,854	120	1,130	212	8,854	7,512	17	.....	12	.....	5	.....	3
4,336	2,580	24,484	.....	3,485	188	62,519	805	121,887	58,063	20	.....	.....	.....	20	.....	4
3,960	2,008	77,249	.....	3,080	1,304	101,442	3,287	261,766	157,037	105	.....	.....	.....	105	.....	5
72,796	45,045	715,806	4,234	5,015	20,050	2,543,432	17,882	3,708,558	1,147,244	1,343	1,200	.....	.....	143	801	6
48,613	25,004	151,050	.....	15,688	4,167	282,040	7,370	726,430	437,011	406	165	10	.....	231	2	7
113,886	47,207	601,102	.....	2,330	12,794	2,428,012	2,400	3,816,150	1,385,720	4,972	4,875	.....	.....	97	590	8
71,589	90,715	558,767	.....	28,728	16,862	2,125,414	62,175	3,697,270	1,509,000	1,161	400	44	.....	717	90	9
81,276	21,808	614,100	600	040	13,429	105,948	346,028	1,493,285	980,700	5,852	5,369	228	.....	255	.....	10
1,980	1,080	14,865	.....	1,180	337	35,002	587	62,099	26,510	29	6	6	.....	17	.....	11
9,800	8,019	47,070	.....	3,995	1,470	460,062	15,829	607,640	131,749	245	144	4	.....	97	.....	12
10,340	3,193	47,920	.....	375	1,008	181,420	5,426	251,009	84,163	330	322	3	.....	5	.....	13
15,603	1,017	258,247	.....	4,207	4,120	1,258,077	22,232	1,773,766	493,457	3,499	3,274	142	25	28	.....	14
10,828	1,107	233,480	.....	4,285	3,681	1,227,093	18,751	1,692,378	446,534	3,246	3,108	116	.....	22	.....	15
4,700	420	17,612	.....	12	349	19,792	750	40,578	29,036	201	160	10	25	.....	.....	16
75	.....	7,155	.....	.....	90	11,192	2,731	31,810	17,887	22	.....	16	.....	6	.....	17
10,884	8,031	67,361	150	12	1,310	173,458	4,009	284,506	106,139	600	585	5	.....	10	.....	18
91,480	72,090	518,181	15,000	23,503	19,453	1,338,900	22,005	2,468,557	1,102,652	1,620	813	239	42	535	33	19
91,480	72,090	501,696	15,000	21,493	19,291	1,322,981	21,073	2,411,870	1,067,816	1,558	813	189	42	514	33	20
61,767	3,390	206,538	702	2,040	162	15,919	932	51,687	34,836	71	.....	50	.....	21	.....	21
.....	.....	.....	.....	.....	27,053	152,862	2,725	426,334	270,747	458	.....	.....	.....	458	20	22
193,450	459,915	6,607,104	.....	.....	35,178	10,463,372	298,209	18,216,056	7,454,475	6,980	6,021	31	.....	928	11,021	23
54,896	77,960	309,201	142,741	10,133	7,427	1,718,955	26,469	2,673,734	928,310	333	4	28	.....	301	9	24
24,699	51,952	20,478	.....	5,914	2,499	908,951	9,372	1,137,189	218,866	281	10	.....	.....	271	.....	25
28,070	46,004	383,710	.....	.....	21,530	50,759	1,019,547	1,606,809	536,503	2,057	1,672	.....	.....	385	880	26
100,003	90,605	236,373	757	35,267	13,206	1,794,482	37,161	2,712,845	881,202	1,089	457	25	.....	607	.....	27
58,869	74,343	165,335	757	15,196	8,814	1,384,542	16,171	1,952,156	551,443	651	350	2	.....	199	.....	28
41,134	16,262	71,038	.....	20,071	4,392	400,040	20,990	760,689	329,759	538	107	23	.....	408	.....	29
30,000	18,008	480,346	1,137	9,973	3,605	1,405,241	3,511	2,230,630	821,878	1,840	1,217	50	15	49	.....	30
30,000	18,008	476,879	137	9,973	3,558	1,402,608	3,511	2,219,835	813,656	1,259	1,136	59	15	49	.....	31
22,700	16,408	90,675	1,000	4,853	47	2,573	.....	10,795	8,222	81	81	.....	.....	.....	.....	32
110,800	89,142	2,174,057	300	4,853	2,255	310,417	2,514	606,689	193,758	165	45	.....	.....	120	.....	33
6,550	12,048	35,751	.....	1,424	111,723	5,864,500	192,801	10,216,185	4,158,884	34,220	18,210	15,277	.....	733	15,736	34
.....	.....	.....	.....	.....	435	73,903	4,733	170,747	92,111	266	92	70	.....	98	.....	35
9,500	14,808	16,227	.....	3,130	817	118,102	173	195,052	76,772	.....	.....	.....	.....	.....	.....	36
66,712	18,993	100,951	.....	981	14,416	1,025,617	112,359	1,070,879	539,003	4,300	4,238	.....	56	15	23	37
.....	1,000	14,354	200	1,070	71	5,377	490	28,233	22,366	4	.....	.....	.....	.....	.....	38
234,617	272,047	1,050,645	13,432	2,982	82,711	7,770,639	225,282	11,350,120	3,354,199	10,577	13,809	206	32	5,530	752	39
141,247	81,330	403,025	.....	25,967	46,326	16,273,812	116,198	18,084,413	2,604,903	23,086	4,491	2,020	14,018	2,557	193	40
5,042	12,258	20,942	.....	3,792	905	208,932	3,887	352,900	65,281	284	37	.....	.....	245	.....	41
104,238	59,318	618,801	100	21,264	18,354	610,750	46,015	1,654,510	907,747	2,411	476	448	215	1,275	130	42
97,518	55,696	524,867	.....	20,994	10,931	519,337	33,730	1,425,339	872,272	2,024	393	440	190	1,001	133	43
6,720	3,622	93,934	100	270	1,423	91,413	12,283	229,171	125,475	390	83	8	25	274	6	44
71,325	38,010	519,812	.....	4,188	11,270	1,057,384	22,274	2,085,442	1,005,784	2,783	2,207	32	.....	544	15	45
62,641	34,930	443,469	.....	2,448	10,749	989,312	20,522	1,903,584	897,750	2,627	2,147	32	.....	448	15	46
8,684	3,080	76,343	.....	1,740	521	72,072	1,752	181,858	108,034	156	60	.....	.....	96	.....	47
57,584	61,971	305,892	.....	30	29,432	102,157	648,100	2,149,938	1,399,681	1,488	1,421	.....	.....	67	22	48
23,460	5,976	327,752	.....	.....	1,704	203,009	55,094	690,420	432,317	286	155	.....	.....	131	.....	49
29,458	10,265	106,461	.....	6,600	2,540	438,137	30,886	670,609	202,086	703	573	.....	.....	220	.....	50
78,329	38,080	751,027	.....	26,372	10,708	2,071,435	36,305	3,515,916	1,408,176	1,343	1,220	15	.....	108	408	51
127,523	49,873	378,089	.....	23,851	38,342	204,313	296,363	1,795,645	1,294,939	13,057	11,947	100	302	708	1,526	52
57,136	25,313	352,434	.....	.....	27,980	1,018,447	1,363,540	3,772,382	490,386	15,210	15,210	.....	.....	.....	465	53
91,150	33,862	524,896	.....	4,000	32,003	8,158,647	59,391	9,834,439	1,616,401	3,648	3,523	110	.....	15	332	54
53,083	22,199	273,211	910	1,561	5,194	285,915	185,090	995,361	524,856	1,729	1,618	24	.....	87	.....	55
22,625	8,255	51,784	.....	1,320	1,159,547	453,314	21,819	1,849,876	1,374,743	1,111	1,093	3	10	5	.....	56
22,625	8,255	46,934	.....	700	1,110,840	431,597	20,452	1,758,451	1,306,402	936	1,093	3	.....	5	.....	57
.....	.....	4,850	.....	620	48,707	21,717	1,367	91,425	68,341	175	165	.....	10	.....	.....	58
87,265	51,303	240,400	.....	.....	254,064	482,182	50,376	1,544,757	1,012,199	2,810	2,755	.....	.....	55	137	59
950	.....	6,090	.....	970	134	5,700	113	21,545	15,732	2	.....	.....	.....	2	.....	60
537,695	279,153	7,014,068	1,251,387	20,168	138,414	7,098,626	135,138	22,938,189	15,704,425	70,125	67,907	555	703	960	240	61
224,181	87,234	1,015,827	10,981	24,452	29,377	3,666,233	32,054	5,688,874	1,990,587	10,650	8,864	202	400	1,184	499	62
57,050	34,729	567,612	11,765	9,058	11,855	335,928	52,216	1,404,085	1,015,942	3,676	2,380	131	875	290	405	63
41,849	28,191	452,360	10,897	7,956	9,603	316,592	41,178	1,172,378	814,608	2,996	1,700	131	875	290	405	64
15,210	6,538	115,152	868	1,102	2,252	19,336	11,038	231,708	201,334	680	680	.....	.....	.....	.....	65

<sup>a</sup> Same number reported throughout the year.<sup>b</sup> Same number reported for one or more other months.<sup>c</sup> None reported for one or more other months.

TABLE 34.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.		Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAR-EST REPRESENTATIVE DAY.								Capital.
			Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Average number.	Wage earners.		Total.	16 and over.		Under 16.							
						Male.	Female.		Number, 15th day of--			Male.	Female.	Male.	Female.						
									Maximum month.	Minimum month.											
1	Mattresses and spring beds.....	22	210	16	17	16	2	159	So	171	130	154	123	31	.....	\$325,992					
2	Millinery and lace goods, trimmed hats and hat frames.....	3	24	4	.....	.....	1	19	No	27	11	22	1	21	.....	10,700					
3	Mineral and soda waters.....	88	476	68	52	57	0	290	Je	355	230	303	278	18	7	1,064,697					
4	Minerals and earths, ground.....	6	86	3	4	3	1	75	My	90	50	66	65	1	.....	456,830					
5	Optical goods.....	4	24	3	1	.....	.....	20	(c)	20	20	20	17	3	.....	23,230					
6	Paints.....	4	60	5	3	3	3	46	Ja	47	45	45	45	.....	.....	140,834					
7	Paper and wood pulp.....	8	1,357	.....	32	51	11	1,260	Ja	1,351	1,214	1,361	1,200	101	.....	7,511,305					
8	Paper goods, not elsewhere specified..	6	201	3	15	9	4	170	Mh	225	142	215	80	110	1	0	371,121				
9	Paving materials.....	21	710	14	28	27	5	612	So	806	474	639	637	.....	2	1,245,113					
10	Peanuts, grading, roasting, cleaning, and shelling.....	25	1,630	7	50	02	15	1,505	Mh	1,812	1,110	1,812	382	1,392	2	30	2,332,200				
11	Printing and publishing, book and job.....	165	1,932	157	110	112	92	1,452	.....	.....	.....	1,474	1,050	388	30	.....	3,364,301				
12	Job printing.....	160	1,892	155	112	90	85	1,444	Mh	1,476	1,309	1,465	1,047	388	30	.....	2,605,967				
13	Book publishing and printing, including lithotype work.....	5	40	2	7	10	7	8	Mh	9	7	9	0	.....	.....	608,304					
14	Printing and publishing, newspapers and periodicals.....	218	1,801	220	128	350	125	900	.....	.....	.....	902	792	130	40	.....	2,934,014				
15	Printing and publishing.....	20	935	10	45	302	62	510	Oe	518	400	490	410	40	22	.....	1,718,477				
16	Printing, publishing, and job printing.....	150	718	108	50	25	30	445	No	404	433	458	360	81	17	.....	875,441				
17	Publishing without printing.....	39	148	45	33	23	33	14	(S)	14	(c)	14	13	.....	1	.....	340,000				
18	Saddlery and harness.....	40	352	45	14	32	7	254	Ja	270	No	255	251	3	1	.....	947,538				
19	Shirts.....	3	67	3	4	1	1	58	Mh	95	So	102	12	78	4	8	13,384				
20	Silk goods, including throwsters.....	0	723	.....	13	12	7	601	.....	.....	.....	603	204	342	49	68	663,073				
21	Finished products.....	5	208	.....	7	11	3	277	My	353	No	213	100	103	2	8	464,125				
22	Throwing and winding.....	4	425	.....	6	11	4	414	Je	475	No	352	450	104	230	47	60	498,048			
23	Slaughtering and meat packing.....	21	515	20	24	62	13	366	Ja	505	My	330	440	410	28	2	.....	2,250,042			
24	Stoves and ranges.....	5	377	.....	19	29	5	324	Mh	364	Jy	217	313	308	.....	5	.....	1,044,770			
25	Structural ironwork, not made in steel works or rolling mills.....	11	730	5	40	58	10	617	Je	820	No	377	748	745	3	.....	2,220,812				
26	Tinware.....	3	303	.....	10	10	4	360	So	464	Ja	247	440	331	84	18	7	2,530,808			
27	Tobacco, chewing and smoking.....	14	2,075	6	77	260	31	1,695	.....	.....	.....	1,730	983	762	45	20	.....	7,749,778			
28	Plug or chewing.....	7	483	4	24	34	4	417	Ap	531	Je	278	515	200	228	11	7	874,117			
29	Smoking.....	7	1,602	2	53	232	27	1,278	Ja	1,300	Je	1,145	1,185	604	534	34	13	6,875,001			
30	Tobacco, cigars and cigarettes.....	62	5,195	70	106	354	52	4,613	Mh	4,016	Au	4,327	4,504	1,267	3,096	32	190	6,717,718			
31	Trunks and valises.....	11	1,346	8	52	90	22	1,174	My	1,234	Je	1,023	1,167	1,005	50	101	2	2,924,723			
32	Upholstering materials, excelsior.....	14	210	22	13	4	3	177	Ja	190	No	168	108	180	.....	0	.....	291,153			
33	Vinegar and cider.....	12	53	7	8	8	3	27	.....	.....	.....	50	48	.....	2	.....	202,801				
34	Vinegar.....	9	48	5	8	8	3	24	Oe	50	Ja	13	39	37	.....	2	.....	184,751			
35	Cider.....	3	5	2	.....	.....	.....	3	Se	8	De	4	11	11	.....	.....	18,140				
36	Wirework, miscellaneous.....	4	12	4	3	.....	.....	5	(S)	5	(S)	5	5	5	.....	.....	19,050				
37	Wood, turned and carved.....	19	262	22	12	4	1	223	Ap	241	Je	198	225	222	.....	3	.....	230,855			
38	Woolen goods.....	12	464	13	12	7	1	431	De	510	Mh	307	531	383	133	9	0	901,149			
39	All other industries *.....	245	15,405	177	414	760	102	13,883	.....	.....	.....	.....	.....	.....	.....	.....	51,547,734				

\* Owned power only.

\* Same number reported for one or more other months.

\* All other industries embrace—  
Artificial limbs..... 2  
Artificial stone products..... 15  
Automobile bodies and parts..... 3  
Automobiles..... 1  
Babbitt metal and solder..... 2  
Bags, other than paper..... 10  
Bags, paper..... 1  
Baking powders and yeast..... 4  
Baskets, and rattan and willow ware..... 2  
Belting, leather..... 1  
Billiard tables and materials..... 1  
Blacking, stains, and dressings..... 1  
Bluing..... 2

Boot and shoe cut stock..... 1  
Boot and shoe findings..... 2  
Boxes, cigar..... 2  
Brass, bronze, and copper products..... 1  
Canning and preserving, oysters..... 2  
Cars, steam-railroad, not including  
operations of railroad companies..... 1  
Cement..... 2  
Cheese..... 1  
Chemicals..... 3  
Cleansing and polishing prepara-  
tions..... 1  
Clothing, horse..... 1  
Clothing, women's..... 6

Coffins, burial cases, and undertakers'  
goods..... 5  
Cordage and twine..... 1  
Cordials and flavoring syrups..... 1  
Cork, cutting..... 1  
Electrical machinery, apparatus, and  
supplies..... 1  
Electroplating..... 3  
Envelopes..... 1  
Felt goods..... 1  
Fireworks..... 1  
Flags and banners..... 3  
Flavoring extracts..... 7  
Fur goods..... 1

Gas machines and gas and water me-  
ters..... 1  
Glass, cutting, staining, and orna-  
menting..... 2  
Gloves and mittens, leather..... 3  
Hand stamps..... 2  
Hats and caps, other than felt, straw,  
and wool..... 1  
Hats, straw..... 2  
Iron and steel, steel works and rolling  
mills..... 2  
Iron and steel, cast-iron pipe..... 3  
Iron and steel, doors and shutters..... 1

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.							Value of products.	Value added by manufacture.	POWER.						
Salaries and wages.			For contract work.	Rent and taxes.		For materials.			Primary horsepower.					Electric horsepower generated in establishments reporting.	
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.			Fuel and rent of power.	Total.	Steam engines. <sup>1</sup>	Internal combustion engines.	Water wheels and motors. <sup>1</sup>		Electric (rented).

THE STATES—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES—Continued.

\$23,504	\$10,799	\$74,072	\$160	\$7,146	\$1,240	\$221,993	\$4,791	\$445,020	\$218,236	283	90	35		158	1
180	180	5,195		1,380	635	10,300	79	28,397	12,018	1				1	2
71,410	46,281	122,501		17,334	7,735	570,478	10,032	1,196,734	616,224	465	199	49	7	210	14
5,030	4,299	38,040	1,744	1,797	980	39,164	7,460	107,326	60,702	850	175	5	500	170	200
1,800		13,454		1,350	134	21,086	579	45,658	23,993	6				6	5
3,900	4,480	20,023		3,000	848	111,689	2,136	184,077	70,252	190				65	6
126,575	101,446	691,753		3,310	32,884	3,130,524	293,007	5,501,084	2,077,553	13,585	8,075	225	5,025	260	4,871
22,892	13,734	34,567		1,872	2,492	232,095	2,544	376,847	142,208	288	45	12	150	81	7
39,258	47,350	279,898		5,719	4,107	612,240	42,594	1,135,097	580,263	2,110	1,935			125	72
115,183	66,816	327,955	841	11,447	17,641	9,487,430	30,646	10,981,159	1,463,083	2,973	2,805			168	108
221,061	137,538	845,432	217,327	56,639	26,943	1,144,424	43,253	3,402,181	2,214,504	1,347	167	30		1,150	11
201,780	115,877	838,047	53,022	54,809	22,405	1,091,535	42,547	3,060,596	1,926,514	1,344	167	30		1,147	12
19,881	21,061	6,785	163,405	1,830	4,478	52,898	700	341,585	287,990	3				3	13
189,416	342,695	599,466	180,507	51,738	16,529	580,238	45,184	3,094,585	2,469,163	1,250	33	177		1,040	15
101,018	284,334	377,613	13,477	32,232	10,236	430,398	31,255	2,034,690	1,573,037	766	10	1		755	15
46,398	24,328	209,553	8,048	15,888	4,643	135,909	13,452	697,988	545,627	452	23	172		287	16
42,000	34,033	12,300	158,982	3,618	1,660	13,931	477	361,907	347,499	32		4		28	17
27,309	43,472	127,536	1,250	12,812	6,631	730,750	7,977	1,042,972	304,239	150	35	13		102	18
3,500	100	13,807	500	775	40	45,819	429	91,354	45,106	7				7	19
37,268	27,451	210,331	24,013	7,400	4,277	1,076,803	16,989	1,772,931	679,079	1,798	1,005	60	490	243	478
12,065	8,184	88,400	24,013	7,400	1,686	305,211	6,757	834,943	522,975	348	235	60		53	60
24,003	19,267	121,931			2,691	771,652	10,232	937,988	156,104	1,450	770		490	190	412
40,670	70,557	212,476	1,300	1,598	12,374	3,678,626	46,948	4,362,272	636,798	3,084	2,840	37		201	22
43,946	44,008	208,381			6,655	173,035	13,761	528,447	341,661	555	105			450	23
92,416	53,708	415,271		2,591	12,135	1,519,846	34,772	3,140,530	1,585,012	4,261	170	19		4,072	24
28,542	24,685	174,110	600	132	6,918	677,853	11,016	1,125,294	436,425	334	245	10		79	26
100,836	349,432	499,072		10,748	1,611,620	4,427,750	53,701	8,765,179	4,283,728	1,085	321	100		404	27
34,792	36,400	109,988		6,200	190,563	410,043	9,338	1,011,650	585,675	307	261	90		16	28
132,074	313,082	389,084		4,548	1,320,963	4,011,107	44,303	7,753,523	3,698,053	778	320	10		448	29
200,737	488,108	1,065,509	2,198	10,250	4,561,020	7,609,824	50,662	21,330,634	13,710,148	2,174	2,150			24	30
97,371	82,966	496,804		1,305	20,086	1,107,235	7,088	2,420,881	1,216,658	955	911	12		32	31
12,086	4,392	67,074	1,200	100	1,768	140,244	5,129	274,065	129,292	1,610	1,610			460	32
9,615	6,950	11,876	254	1,010	633	183,312	1,808	270,934	85,814	123	36	23		64	33
9,615	6,950	11,105	254	1,010	589	177,287	1,618	261,059	82,154	87		23		64	34
		771			47	6,025	190	9,875	3,660	30	36			7	35
600		2,300	25	420	65	3,065	146	10,167	6,956	7					36
14,500	3,300	74,460		1,795	945	136,750	1,686	339,593	201,157	1,223	1,179	8		36	37
15,457	6,770	168,195	1,712	200	5,104	406,662	10,173	789,623	369,788	911	430	111	345	25	50
961,861	988,244	7,266,792		91,564	204,947	24,218,879	1,089,434	39,338,170	13,999,557	49,651	35,136	906	6,090	7,519	22,613

\* Same number reported throughout the year.

Iron and steel forgings, not made in steel works or rolling mills.....	2	Musical instruments, organs.....	2	Roofing materials.....	2	Steam fittings and steam and hot-water heating apparatus.....	1
Jewelry.....	1	Oil, cottonseed, and cake.....	2	Rubber goods, not elsewhere specified	1	Stencils and brands.....	2
Lard, refined, not made in slaughtering and meat-packing establishments.....	1	Patent medicines and compounds.....	32	Sausage, not made in slaughtering and meat-packing establishments.....	1	Stereotyping and electrotyping.....	1
Liquors, vinous.....	2	Perfumery and cosmetics.....	4	Scales and balances.....	1	Sulphuric, nitric, and mixed acids.....	1
Lithographing.....	2	Pickles, preserves, and sauces.....	10	Shipbuilding, including boat building.....	29	Tools, not elsewhere specified.....	1
Locomotives, not made by railroad companies.....	1	Pipes, tobacco.....	2	Show cases.....	1	Varnishes.....	1
Millstones.....	1	Plated ware.....	1	Signs and advertising novelties.....	1	Wall plaster.....	3
Mirrors, framed and unframed, not elsewhere specified.....	2	Pottery.....	1	Smelting and refining, copper.....	1	Whips.....	1
Models and patterns, not including paper patterns.....	2	Printing and publishing, music.....	1	Smelting and refining, zinc.....	1	Window and door screens.....	2
		Printing materials.....	1	Smelting and refining, not from the ore.....	1	Window shades and fixtures.....	2
		Pumps, steam.....	1	Soda-water apparatus.....	1	Wood preserving.....	3
		Regalia and society badges and emblems.....	1	Statuary and art goods.....	1	Wooden goods, not elsewhere specified.....	1

TABLE 34.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.									WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Average number.	Wage earners.		Total.	16 and over.		Under 16.		
					Male.	Female.		Maximum month.	Minimum month.		Male.	Female.	Male.	Female.	

## CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

1	NORFOLK—All industries...	211	6,762	172	265	328	97	5,900	My	6,406	Au	5,320	6,136	4,764	1,308	41	23	\$13,750,072
2	Bread and other bakery products...	15	263	12	12	30	10	109	Se	204	Fe	191	190	180	5	2		380,338
3	Carriages and wagons...	7	154	10	8	15		121	Je	143	Do	71	112	112				390,799
4	Copper, tin, and sheet-iron work...	3	23	4			1	18	(3)	18	(9)	18	18	18				14,204
5	Foundry and machine-shop products...	9	157	14	8	5	1	129	Ja	151	Se	113	127	126		1		226,890
6	Ice, manufactured...	8	134	2	14	0	1	108	Jy	131	Do	88	90	90				580,587
7	Lumber, planing-mill products, not including planing mills connected with sawmills...	9	300	8	18	0	3	262	Jy	278	Do	235	237	235		2		505,894
8	Marble and stone work...	5	30	6	3	8		18	Au	26	Do	14	21	21				59,350
9	Mineral and soda waters...	6	55	2	7	8	2	36	Au	43	Do	30	39	39				110,069
10	Printing and publishing...	35	418	34	42	98	20	224	Mh	231	Do	217	219	178	35	6		618,759
11	Tobacco, cigars and cigarettes...	15	66	16	1	1		48	Mh	60	Je	31	52	50	2			91,927
12	All other industries*	99	5,162	64	152	150	69	4,737					5,016	3,007	1,266	30	23	10,750,085

\* All other industries embrace—

2	Agricultural implements...	1	Brooms...	1	Chemicals...	1	Cooperage...	2
2	Artificial stone products...	1	Canning and preserving, oysters...	1	Cleaning preparations...	1	Cordials and flavoring sirups...	1
2	Awnings, tents, and sails...	1	Cars and general shop construction and repairs by electric-railroad companies...	1	Clothing, horse...	1	Dairymen's, poultrymen's, and apirists' supplies...	1
4	Bags, other than paper...	1	Cars and general shop construction and repairs by steam-railroad companies...	1	Clothing, men's and youth's...	2	Druggists' preparations...	1
1	Boot and shoe findings...	1			Clothing, women's...	1	Electroplating...	1
3	Boxes and cartons, paper...	1			Coffins, burial cases, and undertakers' goods...	1	Fertilizers...	2
1	Boxes, wooden packing...	1			Confectionery and ice cream...	11		
1	Brick...	1						

1	RICHMOND—All industries...	406	20,533	350	731	1,725	445	17,282	Ja	18,500	Au	16,372	17,703	13,038	4,273	179	213	\$48,667,108
2	Awnings, tents, and sails...	5	13	3				10	Co	10	Do	7	11	8	3			10,008
3	Boxes and cartons, paper...	9	414	7	22	18	7	390	Co	370	Je	344	368	120	240	5	3	484,690
4	Bread and other bakery products...	21	550	23	13	47	21	446	Jy	400	Fe	432	451	364	88	1		784,048
5	Carriages and wagons...	19	149	24	3	5		117	Je	124	Do	108	108	108				219,916
6	Cars and general shop construction and repairs by steam-railroad companies...	4	2,071		24	65	1	1,081	Se	2,000	Je	1,046	1,959	1,951	8			1,703,507
7	Confectionery and ice cream...	22	318	15	20	53	16	214					208	188	75	5		557,641
8	Confectionery and chewing gum...	10	210	5	10	32	9	154	Co	160	Au	144	151	91	60			240,001
9	Ice cream...	12	108	10	10	21	7	90	Do	114	Do	44	117	97	15	5		317,640
10	Cooperage, hogsheds and barrels...	4	82	5		1		76	Fe	105	Au	53	68	68				64,259
11	Copper, tin, and sheet-iron work...	10	81	12	4	4	1	60	Jy	72	Ja	50	63	63				90,335
12	Food preparations...	6	33	4	2	3	1	23	Fe	28	Jy	18	27	19	2	1	6	60,045
13	Foundry and machine-shop products...	25	307	22	15	9	5	256	My	286	No	236	240	239	1			520,805
14	Furniture...	8	225	7	8	1	4	205	Se	213	Ja	191	208	204	3	1		267,618
15	Ice, manufactured...	8	118	8	8	6	2	94	Jy	107	Ja	76	88	88				1,101,810
16	Leather goods...	13	405	8	11	30	8	348	Ja	305	No	324	347	333	13	1		1,202,658
17	Lumber and timber products...	17	775	14	27	30	6	689	Je	741	Do	637	641	612		20		1,324,238
18	Marble and stone work...	13	87	15	1			71	My	79	No	66	70	70				70,920
19	Mattresses and spring beds...	5	45	6	3			36	Co	49	Jy	33	35	30	5			35,214
20	Mineral and soda waters...	10	77	5	11	12	2	47	Au	54	Do	30	40	37	3			74,960
21	Pickles and sauces...	4	50		9	3	3	44	Do	62	Se	28	68	23	39	6		83,078
22	Printing and publishing, book and job...	60	1,048	52	60	76	62	708	Do	821	Jy	764	820	579	220	12		1,884,374
23	Printing and publishing, newspapers and periodicals...	33	468	17	40	107	62	182					103	180	8	5		840,811
24	Printing and publishing...	7	332	3	12	149	25	143	Co	149	My	135	147	143	1	3		454,675
25	Printing, publishing, and job printing...	5	50	2	2	1	6	39	Do	46	Se	30	40	37	7	2		80,345
26	Publishing without printing...	21	86	12	26	17	31											290,791
27	Tobacco manufactures...	16	5,073	10	115	561	77	4,310	Ja	4,565	Au	4,112	4,233	1,388	2,661	17	107	12,174,114
28	All other industries*	154	8,135	93	335	625	167	6,915					7,397	6,366	897	90	38	25,003,742

\* Owned power only.

\* Same number reported for one or more other months.

* All other industries embrace—	2	Bluing...	1	Coffee and spice, roasting and grinding...	7	Flour-mill and gristmill products...	3
Agricultural implements...	2	Bookbinding and blank-book making...	5	Coffins, burial cases, and undertakers' goods...	1	Fur goods...	1
Artificial limbs...	2	Boot and shoe cut stock...	1	Cork cutting...	1	Gas, illuminating and heating...	4
Artificial stone products...	1	Boots and shoe findings...	1	Druggists' preparations...	1	Glass...	1
Automobile bodies and parts...	2	Boxes, cigar...	1	Electrical machinery, apparatus, and supplies...	1	Glass, cutting, staining, and ornamenting...	1
Babbitt metal and solder...	2	Brick...	3	Electroplating...	1	Hand stamps...	1
Bags, other than paper...	4	Brooms...	3	Engraving, steel and copper plate, including plate printing...	2	Hats and caps, other than felt, straw, and wool...	1
Bags, paper...	1	Cars and general shop construction and repairs by electric-railroad companies...	3	Envelopes...	3	Iron and steel, steel works and rolling mills...	2
Baking powders and yeast...	4	Cars and general shop construction and repairs by steam-railroad companies...	1	Fertilizers...	1	Iron and steel, forgings, not made in steel works or rolling mills...	1
Baskets, and rattan and willow ware...	1	Clothing, men's and youth's...	1	Flavoring extracts...	3		
Belted, leather...	1	Clothing, women's...	1				
Billiard tables and materials...	1						
Blacking, stains, and dressings...	1						

# MANUFACTURES—VIRGINIA.

1569

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal-combustion engines.	Water wheels and motors. <sup>1</sup>	Electric (rented).	

## CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$500,592	\$360,498	\$2,534,413	\$109,410	\$157,575	\$169,136	\$7,811,693	\$496,535	\$14,955,135	\$6,646,907	13,038	9,031	74	.....	3,933	779	1
15,260	26,501	129,226	.....	5,326	3,422	518,067	11,526	836,030	306,437	259	67	16	.....	176	.....	2
16,400	13,172	70,761	.....	8,700	2,216	212,580	3,418	376,712	160,714	166	75	.....	.....	91	.....	3
.....	600	12,272	.....	745	66	10,692	104	37,786	26,990	2	.....	.....	.....	2	.....	4
11,800	6,106	89,785	100	2,640	1,091	73,617	6,285	227,175	147,273	216	40	.....	.....	175	.....	5
24,200	12,500	86,066	.....	20,000	12,158	79,847	79,847	419,223	304,600	3,572	3,542	.....	.....	80	95	6
27,038	12,180	121,169	.....	5,200	3,703	571,627	1,065	841,022	268,330	810	760	.....	.....	50	100	7
3,500	1,135	13,938	.....	970	565	34,344	267	74,571	39,960	19	.....	.....	.....	19	.....	8
11,880	4,814	13,695	.....	3,360	678	92,199	966	178,340	85,175	52	10	.....	.....	42	.....	9
69,044	100,856	154,887	5,546	19,570	4,917	235,893	11,438	848,703	601,372	296	.....	.....	.....	296	.....	10
1,200	900	29,685	.....	2,055	9,289	43,483	146	108,945	62,316	.....	.....	.....	.....	.....	.....	11
320,270	181,729	1,813,029	103,764	88,109	130,431	5,984,316	381,473	11,009,628	4,043,840	7,647	4,637	58	.....	3,052	554	12

Flavoring extracts.....	2	Liquors, malt.....	1	Patent medicines and compounds.....	7	Shipbuilding, wooden, including boat building.....	8
Flour-mill and gristmill products.....	1	Liquors, vinous.....	1	Peanuts, grading, roasting, cleaning, and shelling.....	3	Silk goods, finished products.....	1
Food preparations.....	2	Looking-glass and picture frames.....	3	Plated ware.....	1	Smelting and refining, copper.....	1
Furniture.....	1	Lumber and timber products.....	3	Regalia and society badges and emblems.....	1	Stencils and brands.....	2
Gas, illuminating and heating.....	1	Mattresses and spring beds.....	3	Rubber goods.....	1	Structural ironwork, not made in steel works or rolling mills.....	2
Hosiery and knit goods.....	3	Millinery and lace goods, trimmed hats, and hat frames.....	1	Saddlery and harness.....	2	Wirework.....	2
Jewelry.....	1	Paints.....	1				
Lime.....	1						

\$1,560,518	\$2,163,547	\$8,439,602	\$530,970	\$217,337	\$6,309,136	\$29,689,870	\$868,932	\$62,490,667	\$31,931,865	33,940	18,185	1,183	7,074	7,498	10,390	1
.....	.....	4,897	.....	1,475	64	8,601	326	21,561	12,634	6	.....	.....	.....	8	.....	2
35,353	21,390	110,350	.....	7,278	2,984	123,632	5,116	500,948	372,200	301	165	.....	.....	136	2	3
34,104	43,185	231,237	.....	5,750	9,098	898,322	26,423	1,615,285	690,540	459	142	.....	.....	317	4	4
4,400	6,680	79,079	1,800	5,246	2,218	92,703	2,975	256,688	161,008	101	.....	11	.....	90	5	5
38,293	61,706	1,311,942	.....	7,145	983,984	53,474	53,474	2,618,262	1,530,804	1,854	1,854	.....	.....	.....	856	6
41,074	50,555	94,553	757	16,424	5,977	612,689	17,613	1,062,926	462,624	546	240	10	.....	206	.....	7
22,500	40,821	55,773	757	7,935	2,970	418,157	4,556	698,370	275,657	188	160	2	.....	26	.....	8
19,174	9,734	38,730	.....	5,489	3,007	104,532	13,057	394,556	186,967	358	80	8	.....	270	.....	9
.....	1,740	32,052	.....	1,500	1,405	96,666	278	144,467	52,623	3	.....	.....	.....	3	5	10
2,700	2,588	40,109	.....	2,074	1,220	50,302	558	111,366	60,506	22	.....	.....	.....	22	.....	11
2,100	8,538	8,233	.....	2,472	646	100,166	1,630	129,431	24,635	120	31	2	.....	87	.....	12
21,590	11,710	158,782	.....	8,216	4,691	130,171	12,175	401,701	259,355	476	152	63	25	236	10	13
18,474	5,181	134,936	.....	2,398	1,215	123,324	3,361	301,523	174,838	173	120	.....	.....	53	.....	14
17,425	6,463	51,090	.....	300	9,973	23,348	47,473	236,486	215,665	2,003	1,975	.....	12	16	1,158	15
39,501	49,625	197,582	1,250	5,536	9,076	730,728	7,557	1,200,966	471,681	278	195	12	.....	71	.....	16
57,211	34,618	369,894	.....	6,970	9,176	709,703	6,250	1,319,263	603,310	2,410	2,340	.....	.....	70	339	17
1,560	.....	52,967	2,347	1,160	751	29,350	2,407	112,893	81,136	130	.....	35	.....	95	.....	18
3,720	.....	21,613	.....	2,030	240	43,599	637	85,357	41,121	25	.....	5	.....	20	.....	19
17,460	14,045	28,902	.....	4,291	1,285	148,834	2,073	270,951	120,044	62	26	3	7	26	.....	20
14,780	2,637	18,866	.....	5,113	1,176	98,063	1,160	165,445	66,222	41	30	.....	.....	11	.....	21
131,090	87,674	457,081	210,158	28,197	16,155	748,524	25,378	2,097,734	1,328,832	792	150	2	.....	640	4	22
68,467	163,319	157,402	157,966	25,156	5,057	181,525	14,249	1,170,151	974,377	417	.....	.....	.....	417	.....	23
29,627	128,355	136,484	9,337	21,048	3,408	160,247	12,140	802,711	630,324	376	.....	.....	.....	376	.....	24
2,020	3,469	20,918	2,082	1,590	201	13,094	2,021	56,943	41,828	41	.....	.....	.....	41	.....	25
36,820	31,495	.....	146,547	2,518	1,448	8,184	88	310,497	302,225	.....	.....	.....	.....	.....	.....	26
284,152	771,014	1,520,397	2,198	8,650	5,771,282	9,404,045	80,948	24,856,752	15,371,759	1,899	1,450	.....	.....	449	578	27
726,404	823,879	3,356,738	154,494	77,101	449,402	14,356,591	556,371	23,719,513	8,806,051	21,822	9,315	1,040	7,030	4,437	7,438	28

\*Same number reported throughout the year.

Leather, tanned, curried, and finished.....	2	Models and patterns, not including paper patterns.....	2	Pottery.....	1	Stereotyping and electrotyping.....	1
Liquors, distilled.....	1	Optical goods.....	1	Printing materials.....	1	Stoves and ranges.....	3
Liquors, malt.....	2	Paints.....	1	Roofing materials.....	2	Structural ironwork, not made in steel works or rolling mills.....	2
Lithographing.....	2	Paper and wood pulp.....	3	Sausage, not made in slaughtering and meat-packing establishments.....	1	Tinware, not elsewhere specified.....	1
Locomotives, not made by railroad companies.....	1	Paper goods, not elsewhere specified.....	1	Scales and balances.....	1	Varnishes.....	1
Looking-glass and picture frames.....	2	Patent medicines and compounds.....	8	Shirts.....	1	Vinegar and cider.....	2
Millinery and lace goods, trimmed hats and hat frames.....	2	Paving materials.....	1	Silk goods, finished products.....	1	Whips.....	1
Minerals and earths, ground.....	1	Peanuts, grading, roasting, cleaning, and shelling.....	1	Slaughtering and meat packing.....	3	Window shades and fixtures.....	1
Mirrors, framed and unframed, not elsewhere specified.....	1	Perfumery and cosmetics.....	4	Smelting and refining, not from the ore.....	1	Wirework.....	2
		Photo-engraving.....	2	Soda-water apparatus.....	1	Wood, turned and carved.....	2
				Statuary and art goods.....	1	Wooden goods, not elsewhere specified.....	1



## MANUFACTURES—VIRGINIA.

TABLE 34.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of--			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

## CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

1	ALEXANDRIA.....	40	1,719	37	85	73	20	1,504	Ap	1,644	Aug	1,206	1,542	1,425	84	22	11	\$1,573,526
2	DANVILLE.....	43	2,800	31	57	67	14	2,091	Jy	2,700	Jan	2,579	2,799	1,821	874	49	55	6,783,464
3	LYNCHBURG.....	73	3,958	58	135	167	124	3,474	My	3,635	Aug	3,155	3,060	2,507	1,051	63	48	8,425,036
4	PETERSBURG.....	87	4,320	63	174	141	30	3,903	Mh	4,180	Dec	3,633	3,933	2,265	1,449	171	48	6,497,130
5	PORTSMOUTH.....	42	900	47	37	40	9	767	Jy	808	Jan	690	835	633	170	22	10	1,477,650
6	ROANOKE.....	73	6,016	51	107	811	51	5,496	My	5,782	Dec	5,116	5,648	5,389	253	5	1	9,660,114
7	STAUNTON.....	45	446	40	21	27	3	346	My	381	Dec	275	369	251	99	19	.....	813,273

¹ Owned power only.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 to 50,000 INHABITANTS—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. <sup>1</sup>	Internal-combustion engines.	Water wheels and motors. <sup>1</sup>	Electric (rented).	

## CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

\$143,050	\$80,800	\$857,645	\$1,400	\$3,066	\$91,779	\$1,833,822	\$126,027	\$3,680,291	\$1,700,442	3,375	2,063	5	-----	1,307	309	1
95,070	89,797	1,041,535	4,125	8,922	203,606	3,097,913	114,256	5,558,431	2,346,262	7,209	3,484	3	3,475	247	2,519	2
261,075	182,035	1,545,113	437	37,550	180,304	6,358,208	152,731	9,918,779	3,407,840	6,505	4,655	90	620	1,140	703	3
253,253	153,444	1,392,205	360	24,032	102,053	8,302,471	90,749	12,609,943	4,216,723	6,549	4,639	20	690	900	1,426	4
66,583	36,535	347,055	8,421	16,806	14,473	963,020	54,179	1,730,657	713,458	2,664	1,805	34	-----	825	250	5
220,510	312,926	3,326,121	46	27,361	91,611	10,646,299	551,275	16,581,988	5,384,414	11,708	6,683	4	30	4,991	7,080	6
29,196	23,710	148,640	832	9,052	7,335	1,064,514	22,975	1,448,216	360,727	850	591	47	10	202	38	7